

Grass Roots

Craft and self-sufficiency

For down to earth people

AUST \$3.50

Australian and
New Zealand Edition

Registered by
Australia Post
Publication No. VACO 405

ISSN 0310-2890

No. 66.

APRIL 1988

•
Aromatherapy

•
Milking Sheep

•
Homemade Soap

•
Canine Flea
Control

•
Inkle Weaving

•
Earth Floors



Great Reading

from Night Owl

Going Tropical — Living and Fruit Growing in Northern Australia

Ron Edwards

Chapters include living in the tropics, dealing with local government, choosing land and implements for a small holding, gardening and growing instructions for over 120 tropical fruits.

p/b 136 pp \$15.50 post paid

Growing Nuts in Australia

Anthony Allen

An authoritative book on all aspects of nut growing, from establishing a nut grove and propagating your own trees to details of each nut type. A must for all those planting nut trees for food or profit.

p/b 160 pp \$20.50 post paid

The Bullock Driver's Handbook

Arthur Cannon

This book contains a how-to-do-it guide, with details of making the tackle, training bullocks and making your own cart. This unique piece of Australian history makes for fascinating reading.

p/b 136 pp \$15.50 post paid

Community Markets — A Practical Guide

John van Tinteren

A fascinating description of how to live off the earnings from a market stall. John has wide experience in starting and managing a market, and offers practical advice to those wanting to make a living like this.

p/b 128 pp \$13.50 post paid

Starting a Nursery or Herb Farm

John Mason

If you have ever thought of earning some extra money from your gardening interest then you will love this book. It describes how to start a plant business, discusses management, propagation, herb production and herbal products.

p/b 135 pp \$8.50 post paid

Tagasaste Tree Lucerne — High Production Fodder Crop

Dr. L.C. Snook

Tagasaste, commonly referred to as tree lucerne, produces high protein fodder, grows quickly and is relished by stock. Dr Snook explains how to grow Tagasaste for maximum yield. An ideal crop for any farmer.

p/b 104 pp \$10.50 post paid



NIGHT OWL PUBLISHERS: PO Box 764 SHEPPARTON 3630



Feedback Link-up Feedback	4,85
Building — One Woman's Way.....	Linda Woodrow..... 12
Aromatherapy	Gabriele Engstrom..... 16
Sheep's Milk — A Woolly Alternative.....	Lindy Saler..... 18
A Useful Fodder Tree	Leigh Davison..... 20
The Perfect Earth Floor.....	Fiona McIlroy..... 22
Manure Mania	Adriana Fraser..... 23
Flea Allergy in the Dog.....	Bert Luchjenbroers..... 24
Another Flea Story	Suzy Whymark..... 24
An Easy Woven Poncho	Caroline Tully..... 26
Buyer's Guide — Selecting the Healthiest Foods	27
A Stairway to Paradise.....	John Elliot..... 29
Air Ions and Human Health	Dr Allan Mortlock..... 31
Installing a Combustion Cooker	Jon Sturm..... 33
Purebred Poultry Breeding (Part II).....	Owen Frost..... 35
Just a Cackle.....	Pat O'Brien..... 36
More on Inkle Weaving.....	Carolyn Davis..... 37
Water Under the Bridge	Pamala Gray..... 39
Care of Lead/Acid Batteries	Colin Rose..... 41
Winter Bee Management.....	42
Natural Goat Care	Pat Coleby..... 43
Simple Felting	Susan Sawyer..... 44
Grass Roots Reader Survey	49
Homemade Soap.....	Marion Boetje..... 51
Cryptic Grassword	M. Riley..... 53
Poetry	54
Kids Pages.....	56
While the Billy Boils	58
Custard, Real Custard.....	Robert McKenzie..... 59
So, Your Gourds Rotted: Or Did They?.....	59
Greenhouse Management (Part V).....	John Mason..... 60
Penpals.....	61
Concrete Placing, Compaction and Curing on the Farm	62
Encounters with Tanks	Tony Lou..... 63
More Pruning Tips	64
Pruning — My Way.....	Ray Hart..... 65
A Fresh Look at Crop Rotation	Michel Porcher..... 67
Chokos.....	Anne Sands..... 69
Down Home on the Farm.....	David Miller..... 71
Recent Releases.....	74
Grassifieds	75
Information Available.....	84
Gumnut Gossip	Megg Miller..... 90

Front Cover: We are all familiar with endearing little lambs like this one growing up and become useful fleece or meat producers but GR reader Lindy Saler assures us that sheep can also be used to supply milk for the household. Read her article on this woolly alternative on page 18. The charming lad is Winston Thomasson.

Photo courtesy Lindy Saler.

Back Cover: What are the problems that face women builders? 'Few male owner-builders have special skills or aptitudes that are not easily accessible to women' says Linda Woodrow in her article *Building, One Woman's Way*. 'What they do have is confidence born of a knowledge lurking at the back of their minds since childhood that this is part of their culturally expected skills'. For more on this interesting topic see Linda's article on pages 12-15.

Distributed to newsagents by Gordon & Gotch.

Feedback Link-Up Feedback

Dear GR Readers,

I just have to SHARE YESTERDAY'S EXPERIENCE with people who will understand how I felt, no-one else seems to.

My day began, as many have lately, gloomy. Recently we were told we are not suitable for adopting a child, but we are adjusting to this depressing news rather well, even if slowly, and looking forward to making a life that is full; at least there are children and grandchildren through my first marriage, but it's not the same for my (second) loving husband who has never been a natural father (I am 44 yrs and Larry is 32 yrs). Anyhow, shortly after breakfast I discovered my budgie had died in the night, I was heartbroken, she was nearly 8 years old. As the day wore on I couldn't shake the gloom, so in the afternoon Larry and I got in the car and went for a drive up into the Brindabella Ranges, just out of Canberra. I call them 'my mountains' as I have an unusual 'feeling of home' about them. As we got higher into the mountains my gloom began to lift and I began to relax. The scenery is magnificent. You can only see one mountain at a time, as the car rounds a bend, but what a breathtaking sight, and what a glorious feeling to be there. We drove through Corin Forest to Corin Dam, which is the water catchment supply for Canberra. On one side of the dam wall, naturally is the lake, a huge, wondrous amount of water, which has the majestic mountains of green coming down to meet it, all colours of green. On the other side of the wall you have the mountains and gullies, such huge mountains, looking as if they had been sculptured by the most gentle of hands and covered in green velvet and as they ranged further away, the greens discreetly changed to blue. When I got out of the car, I just stood and gaped, my breath totally taken away, and felt like I was home, because I was so much at that moment a part of nature, 'micro' size, but nonetheless a part of it. And at that moment I was so glad to be alive, so sure our life would be a good life, I could feel the promise of the future, and accepted that promise.

I hope you do know what I mean. Thank you for letting me share with you all such an important day. I would like to meet, through our letters, many of you wonderful people, because now I understand why I have always felt as you do and now am able to do something about living that way, I have a new courage to do whatever is destined for me. I am looking forward to making new friends.

**Maureen Edge
26 Alice Jackson Cres
GILMORE 2905.**



Edited by Megg Miller and Kath Harper.

Published by Night Owl Publishers Pty. Ltd, Box 764, SHEPPARTON 3630.

Grass Roots is produced for those who wish to regain control over their lifestyle by exploring the alternatives to modern mass consumption. Whether you've just started out or you're an old hand, why not share your experience and knowledge with other readers of Grass Roots. All contributions of articles and photos are welcome.

Cover design and artwork by Ian Boyd.

Typeset and produced by Layabout Layouts, Box 764, SHEPPARTON, 3630.

Printed by Standard Newspapers, 10-14 Park Rd, CHELTENHAM 3192. Ph: 03-584-8400.

© 1988 by Grass Roots. No part of this publication may be reproduced without written permission of the publisher.

Dear Folk,

Firstly a big thank you to the writer who recommended garlic to alleviate HERPES SIMPLEX 1 symptoms (cold sores); works very well. Perhaps someone diagnosed with H/S 2 could let us know how it goes there? Now here is a simple cure for RINGWORM, which I contracted after reading in the nightmare society's press that it is very difficult to treat (and no doubt quite profitable for doctors): take garlic on two consecutive days and rub eucalyptus oil over the affected area morning and evening after taking. Worm should subside with first treatment. Repeat each week if needed. All praise to the universe for its infinite wonders.

**Philip
5/13 Grafton Cres
DEE WHY 2099.**

Dear Grass Roots,

Poor old COMFREY, that humble herb, has gone from being a panacea to being a poison! In truth it is neither, but is a useful herbal medicine, when used by a trained practitioner. Many therapeutic substances are toxic when taken in excess including many valuable and potent medicinal herbs. The point is that they should only be taken as prescribed by a qualified herbalist for a limited time. An obvious analogy is with chemical drugs. Most of these are scheduled as poisons and many can be fatally toxic if taken in excess. Yet doctors prescribe them routinely, and large numbers of people take them effectively, for the relief of disease symptoms.

Comfrey was condemned on the basis of tests on rats, which were given gross doses for long periods of time, and some developed pathological conditions. No-one has ever, to my knowledge, demonstrated a case of comfrey induced disease in humans. Its listing as a toxic substance is a typical example of bureaucratic over-reaction.

Comfrey is a valuable herb, especially for external application to injuries of the bones and soft tissues. However other herbs are equally effective, and can be substituted for comfrey, for those who prefer not to use it. Indeed it is not suitable for everybody and can cause allergic reactions in some individuals.

Herbal medicine is an ancient and potent science of healing which deserves more respect than it gets today. It is threatened by two forms of extremism: the ultra-cautious who would ban all but the most harmless substances; and the untrained enthusiasts who believe that all herbs are safe to use indefinitely in large self-prescribed doses.

**Michael Sweeney Dip. H.M.
87 Dennis St
NORTHCOTE 3070.**

Dear Megg and David,

Australia's past vast landscape has been grossly scarred for wheat, dairy, produce, fodder and vegetables etc. by cutting down trees to gain space. Exploitative logging and bushfires have taken their ghastly toll to eliminate traditional native edible species — which we should be extensively replanting. Useless deserts have taken over. Even councils choose the least useful plants for road lining, parks and open or urban spaces. Most of our usual food-producing animals are really jungle or bush creatures, for whom the more productive bushland would have given far better fodder than expensive developed and denuding crops.

We propose (and indeed are living with) a total bio-tree food and perennial-plant economy through the careful selection of ideal MULTI-USE SPECIES adaptable to delicious and nutritious consumption by humans and animals. So far no egg-laying tree has been found, but there are 2 types of milk and cheese-yielding trees (*Brosimum alicastrum*, *Brosimum utile*) from S. America that should eventually lead to small backyard self-sufficiency, a great way for increasing land values. However, thus far, we can only find seeds in Castro's Cuba for these trees, which only grows well from cuttings anyway!

By such means and by careful selection of often rare though incredibly important species, farms and gardens will be immeasurably improved; crop unreliability a thing of the past; deserts, erosion and unemployment eliminated; and the beauty of our countryside finally returned to that in ages past — but only if we now educate young folk about these facts and immediately cease the rampant destruction of the world's bank of trees — our few remaining forests, bush and wet lands. '88 cheers as always.

**Pat and Munni
Con St
MACLEAY ISLAND 4165.**



Feedback Link-Up Feedback

Hi Everyone,

We have just moved onto our block at Rosedale and find *Grass Roots* an enjoyable and useful magazine. Thank you all.

Answering Brenda and Nigel Darby, GR63, we too have WHITE ANTS and were told to break their tracks going up the trunk, often more than one. They get confused and lost and die, we hope.

We hope to grow nut and fruit trees on our forty acres, using garlic spray (found in GR 64) to control pests and run geese to keep weeds and grass down. Any info on GEESE will be most welcome.

We're busy erecting a shed/home and are using CRUSHED ANT-BED, it hardens like cement and costs nothing except energy. It needs lino on it though.

Anyone have any ideas how to fill a lovely new dam when it will not rain! Contentment and energy to all.

**R., M. & T.
'Remink'
ROSEDALE 4674.**

Dear GR Readers,

My brother was diagnosed as being SCHIZOPHRENIC four years ago and is getting worse all the time. The drugs he has to take every day for the rest of his life make him very tired, and cause him to put on weight. The doctors know very little about it and I was hoping that people who are caring for, or are themselves schizophrenic would write to me and give any advice or information. Anything at all would be very much appreciated. Love to you all.

**Val Shields
Lot 1 Comboyne Rd
UPPER LANSLOWNE 2430.**

Dear Readers,

We would dearly love to hear from anyone who has or had the skin condition PSORIASIS. My husband suffers from it and the only thing that helps is lots of sunbaking and saltwater, but we now live a long way from the coast. We have done the rounds of skin specialists who offer no real reasons for its occurrence and no safe treatments that work, we have tried various herbal methods but most to no avail. Anyone who has had any success with PSORIASIS or any information please drop us a line.

**C & M Moore
PO Box 47
KYOGLE 2474.**

Dear Folks,

Hi! I guess most people who read *Grass Roots* eventually get the urge to write in and share, so after 2 years, it's my turn! (Many thanks to the GR crew for a real gift of a magazine.)

I rent a flat on an upper floor of a beautiful Victorian house, and as the flat has a lovely balcony which takes in the morning sun, I decided to try my hand at raising vegies in pots. An old, large wire bird cage has become a very handy receptacle for compost making, however by the time my first batch of compost was ready I'd missed the summer vegie planting season. However, my indoor plants needed repotting so I gave them the benefit of this home grown nourishment. I should add that, prior to this decision, I had begun adding new kitchen scraps to the old compost, thinking that I'd continue with it until winter planting time. Consequently, there were still some semi-decomposed items in the mixture that went into the pots with my plants.

Bonus number one was the large earthworm I found in the old soil of a potted palm — he now resides in the birdcage! Bonus numbers two and three were the potatoes and peas that shot up at a later date among the monstera deliciosa and parlour palms! I took care to transplant these vegies to separate pots whilst the moon was in a fertile sign, so I'm sure that will aid their success.

Isn't nature precious and bountiful? I'm so moved and charmed by these gifts, it is like a personal reward for trying to live by her laws. Thanks for sharing my joy; I hope to write again to tell you how my 'gifts' flourished! Let's all keep recycling whatever we can. My love to you all. Peace, health, happiness and prosperity (for the good of all!).

**Sue Crute
1/919 Punt Rd
SOUTH YARRA 3141.**

Dear Readers,

Would anyone in our beaut country have seeds or a cutting belonging to a COW UDDER PLANT, sorry don't know the tech name. Love to hear from you.

**Elaine Blomdale
31 Reservoir Rd
GLENDALE 2285.**

Dear GR,

Being yet another person sentenced to live in an area I'd rather not be in (something many *Grass Roots* readers in the city could relate to), I yearn for the GR type of lifestyle I've dreamed of for years. Experiencing it during holidays makes coming back to the city just so much more difficult! Your magazine gives both hope and inspiration to someone easily disillusioned by city life.

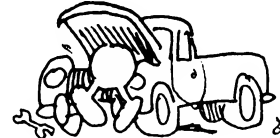
Maybe some readers could let me know how they cope with living where they'd rather not be. I'm feeling slightly trapped. I teach in the western suburbs — and have moved out of the inner city to be closer and avoid travel. But the environment is very uninspiring. If anyone would have information on types of accommodation in the BLUE MOUNTAINS I'd be really grateful. At least I could begin to start living the way I'd like to. I know I can make changes where I am — but honestly the environment really makes a difference. If you've got any info or would like to write please use the address below — of a friend — until I'm sure about where I'm living.

Thanks again for a wonderful magazine.

**'Sooty'
C/- 7/22 Wharf Rd
BALMAIN 2650.**

Dear Readers,

I'm wondering if anyone would be interested in starting up a partnership with someone interested in 'animal training'. Maybe you already live in a rural area or would like to lease or buy land. I prefer the Dandenongs but I'd be glad to hear from anyone interested in starting up my ALTERNATIVE CIRCUS, and living an alternative lifestyle at the same time.



**Aziza
PO Box 85
BURNLEY 3121.**

Dear GR,

I would like to start a CREATIVE WRITING CLUB via correspondence where we can exchange poetry etc. and also offer each other some thoughtful, constructive criticism. If you have some similar ideas I would like to hear from you, or if you would just like to write and say g'day feel free.

**S Moore
RMB 3840 Wisemans Ferry Rd
SOMERSBY 2250.**

Dear Megg and Readers,

I'm just writing for some info on markets that cater for natural growers. We are a family on a dry land wheat farm in the Mallee. On the farm, which we share farm, we grow all our WHEAT and GRAINS completely naturally. We use NO FERTILISERS whatsoever and NO CHEMICALS. We operate on the deep tillage principle where we work the ground deep which aerates, breaks the compaction layer and lets the plants go down and gives them access to the minerals and goodness they require to grow. We also rely on the breath of life, water and sunlight that God provides.

We have our own cleaner and mill on the property where we grind our wheat into 'whole grain' flour and porridge. We package our wheat, flour and porridge in 5 kg calico bags and we also have up to 50 kgs in jute bags. I would much appreciate any information on reasonably LOCAL MARKETS that have a good natural content.

Keep up the good magazine as I think we all should move towards self sufficiency as it is the only way we can survive the rat race of our modern world.

**Ken Hercott
Hercott's Natural Foods
PO Box 1132
SWAN HILL 3585.**

Dear GR,

This reader wishes to know how to construct a SOLAR PERGOLA. The said structure provides shade during the summer, but allows penetration of the winter sun to the sheltered area. The sun's rays are varied by angled battens affixed to the top of the structure; the angle of the batten is dependent on the latitude of the pergola. Has any GR reader built one, or does anyone know of a design source? All the best.

**Dave Jones
PO Box 152
CONCORD WEST 2138.**

Feedback Link-Up Feedback

Dear GR Readers,

HOME BIRTH is a topic that often arises in *Grass Roots*, so it seems the logical place to contact fellow home-birthers.

We are 2 women, Angie 21, and Blat 29 who last year, with our respective partners had wonderful homebirths. Last year we attended the Homebirth Conference in Perth. It was inspirational and we gained so much from it we are planning to attend this year's Homebirth Conference in Hobart from 27th to 29th of May. We are both experienced builders in stone and would like to have contact with other owner-builders or home-birthers. We also hope to be spending a few days around Hobart before and after the conference. We have experience in birthing with and without a midwife and would like to exchange notes and information with people who share our interests. Hoping to hear from people in Tasmania and SA. With thanks.

Blat, Angie and Karri
C/- PO Box 115
EUDUNDA 5374.

Dear Grass Roots,

I feel very reluctant to criticise the article 'RUBBER TYRE TOMATOES' without offering a contribution that's better, but I suspect it was written by an armchair gardener. Practical gardeners would be disappointed with the results from a method that encourages too much humidity, that in turn encourages fungal diseases. BEES are not only unnecessary for pollination of tomatoes but should not be encouraged at all.

David Stephen
12 Delta Ave
TAROONA 7006.

Dear Megg and Friends,

Please can anyone supply me with a JAM recipe that uses FRUCTOSE in lieu of sugar. I can't handle cane sugar and its derivatives, or honey or maple syrup in my diet and I don't like freezer jams as they are too sloppy. Have had a go using fructose with strawberries — approx. 500 g strawberries to 250 g fructose and ½ pkt jamsetter. It seems to have set OK but it's purely guesswork and it remains to be seen how it tastes and how well it keeps. I understand it may also be possible to make jam from beet sugar but I don't have any recipes and don't have a source of supply.

For those of you who don't wish to make your own cane sugar free jam and who for one reason or another are label readers, Silvan Fruit Processors, Silvan Vic. make a lovely carbohydrate modified jam in a variety of flavours under the label Evelyn County. It retails at approx. \$1.45 per 300 g net. It contains sorbitol; this is shown both as a straight percentage and as a total carbohydrate percentage. Also as a kj yield.

Also, can anyone please give me some advice on how to TRAIN a CROSSBRED PUP (approx. 8 months old — Jan 88) not to chase ducks or round up horses. She is supposedly a lab/heeler X, but the vet assures me she is plenty greyhound and my rather feeble efforts at catching her would certainly substantiate that! What can I use to absorb tension on her running wire on the occasions she has to be chained? A trampoline spring I used has been stretched to almost 3 times its original length, and it's becoming rather tiresome being either hanged or tripped on routine visits to the washing line. All correspondence will be acknowledged promptly.



Chris Philpot
C/- PO Box 254
BORONIA 3155.

Dear Megg and David,

I have been reading your magazine for about five years. I have always been keen on being close to nature. My husband and I built a mudbrick house and after working for nearly three years, we have decided to have a working holiday and go north hence the address.

DARWIN is a beautiful place but we miss our down-to-earth friends, so I am writing in hope that there are like-minded people around the Darwin area that we could get to know. I have heard of a group of people who live outside Darwin who are into solar energy and wind generation, I think it is a type of COMMUNE (I might be wrong). They are near the sea and are surrounded by rainforests, I think the buildings are alternative too. I either read about this place or I saw it in a documentary, that's all I know about it but I would love to see it. If anyone knows where it is please drop a line, thanks for a great mag.

Ann
4/20 Sergisur Circuit
RAPID CREEK 5792.

Dear Readers,

We are considering building a STONE HOUSE after reading an article in GR 43 on stone masonry by Jim and Anita Maxlow. They also wrote a book called *Rock Solid*. Unfortunately it is out of print. If any reader has a copy I would be very willing to buy it and pay postage. Also if any GR people have built in stone and have knowledge of bush timber for house framing we would be very interested.

William and Susan
PO Box 35
RIDDELLS CREEK 3431.

Dear Megg and Friends,

I've started a goat dairy in the Snowy Mountains (everyone else seems to be on the north coast) with 45 hectares, on the side of a 1350 m hill (!) I make French style cheese while working in the ski and tourist industry down/up here.

With 8 goats, donkeys to train and bottle fed foster roos to care for we are always busy. Anyone interested in joining us? 2 cross country skiing maniacs here at the moment.

Does anyone have clues on DONKEY TRAINING (for riding) and GROWING CHESTNUTS? Thanks for the forum Megg, I'd appreciate any advice on these two subjects.

Mike Corbett
Hobbitt Farm
Jillamatong Hill
JINDABYNE 2627.

An article on growing chestnuts appeared in GR 61, p. 20, 'Nuts about Chestnuts'.

Dear GR Readers,

We have nearly finished building our home on 5 acres in a country town near Melbourne. We have decided we wish to get out of the rat race, sell our house and live naturally in a COMMUNITY. I am a carpenter/builder and would like the challenge of building a home out of natural materials that can be acquired from the land.

We are looking forward to living in a sharing community where we could have a 5 to 10 acre share. The area we have been thinking of is Queensland coast. We will be looking forward to hearing from any community in that area. We would like to hear from any readers that have had personal dealing with co-op communities — the advantages and disadvantages and what to look for, e.g. in contacts, general rules and so on.

William & Susan
PO Box 35
RIDDELLS CREEK 3431.

Dear GR People,

We have been a fan of your magazine for some time now although study and bankruptcy problems have prevented us from buying for a while. Now that bankruptcy problems are almost solved we have a few extra dollars to ourselves.

We (husband Trevor 34, children Jason 11 and Sharon 9 and myself Robyn 34) had our own farm that we were buying just south of Rockhampton before bankruptcy. We had a cow, pigs, chooks, dog, cat and a lovely organic garden. What a shock when we had to move out and have to begin buying food again. My kids (especially Sharon) wouldn't eat, resulting in bowel problems. (And I've been told even by doctors that kids wouldn't know the difference!) We have now found a farm to rent and are just beginning to get vegies in even though it's a battle with hot weather.

We are writing for several reasons — one is to say hi to a great magazine and people. I have a need to communicate with other like-minded people and especially anyone in the MACKAY area — we don't know anyone here. I would like some recipes for vegetarian meals. I have some books but they still use butter, sugar, cream and horrors — I have even seen beef or chicken stock being used. Has anyone got a recipe for home-made soap and/or anything else along that line? Lastly we want to have another child — home childbirth and would like to hear from anyone who has been through this experience.

I realise we have asked for a lot but I feel we still have a lot to learn. I am so dissatisfied with most commercially bought goods, and although we need doctors to a point I really distrust most of them.

Best wishes — hope to hear from some of you.

Robyn, Trevor, Jason & Sharon Ellard
Rutlands Rd
M/S 895
MACKAY 4740.

Feedback Link-Up Feedback

Hello Soulmates,

My first letter to your wonderful magazine. I do hope 1988 brings many good things to you all. Let's hope that in all the Bi-Centennial frivolity more folks realise the dire need to treasure our precious earth and salvage what is left.

We are hoping that we can move to north NSW and purchase a small piece of it, grow chemical-free produce and have a small herd of CASHMERE goats. I have cleaned out the local library's goat sections and found nothing on cashmere. Plenty on milkers and angoras. So I am putting out a plea to GR readers for information. Perhaps there is someone who can suggest a book and tell me where I can get it.

Also anyone from the NTH NSW AREA who would like to write, please feel free. We would like to get to know some like-minded folk down there. We hope to come down in about March to look around.

An finally, we live in KURINGOWA CITY and would like to contact any local organic gardeners and also someone who could sell us free-range eggs (ducks, turkeys or hens). Please phone after 6 p.m.

Carol & Jim Fickling
PO Box 279
GARBUTT 4814
Ph: 077-891-083.

One book on cashmeres we can recommend is 'The Cashmere Book' which retails at \$20 and is available from Erinrac Enterprises, Foot Rd, Upper Beaconsfield 3808. Readers may know of others that are equally helpful. Further information on the breed could be obtained from ACGA Admin Officer, English St, Donnybrook 3064.

Dear Megg, David and GR Readers,

Those interested in ALTERNATIVE EYE CARE *Improve Your Sight Without Glasses*, a Science of Life Book (4-12 Tattersalls Lane, Melbourne 3000), is very good.

Make a CHEAP EAT by saving seeds from pumpkins. Wash, clean off all orangy pulp. Bake in oven, dry until seeds are golden brown. Stir when you remember to. Store in jar (if there's any left!).

HOMEMADE SHAMPOO: 100 mls Herbon dishwashing detergent or similar herbal brand and 2 or 3 drops rosemary essential oil. Decant into bottle and use as per usual shampoo. Herbonics Australia products are sold in Victorian health food stores. They're absolutely wonderful, especially for delicate or sensitive skins and are animal cruelty free!!

When you've cleaned out the FRIDGE or 'substitute' take a clean rag or tissue and put a few drops of vanilla essence on it. Then quickly wipe inside of fridge with tissue. Makes fridge smell nice. Peace and love.

Michael, Rowan and Margaret Sweeney
87 Dennis St
NORTHCOTE 3070.

Dear Megg, David and Readers,

I thought I'd better let you all know that due to unforeseen events over the last six weeks, I am not at the CAMPSIE ADDRESS given in GR 64 (Feedback, p. 7), but am back in my caravan at Coffs Harbour.

There are some things in Sydney I miss very much: such as Bill's Book Exchange in Beamish St, Campsie, and being able to practise Italian whenever I like, and not being considered a freak for doing so. However, it is very pleasant to awake to the sound of magpies warbling, koels with their 'coo-ee' call and the sea in its various moods. You don't hear them in Sydney!

Nearly all my geranium cuttings survived the trip up to Coffs, so I am now very busy working out where to put them, as I can't have a big garden around the van. Before, I got some fruit boxes from the greengrocer and when they were filled with soil, they did the job very well, so it looks like the same again this time. All my pot plants are at my father's place until I get my space reorganised, and then I'll be able to bring Der Jungle home again. I've also 'herbed' a trough with lemon thyme, golden oregano, chives and salad burnet and I planted a foam trough with rocket seed, which all came up. I hope to get some more herbs at the Sunday markets which are held every week in the car park under a local shopping centre. It is very handy, being only five minutes walk from the caravan park.

Although not at the address in GR 64, I'd still like to contact any GR people who live in the Campsie area; we may be able to exchange information and ideas about small space gardening and other topics of interest. Love and peace to all.

Barbara Mauritzen
Site 38 Park Beach C/Pk
COFFS HARBOUR 2450.

Dear Megg and David,

Hi, wrote to you several years ago when I bought my 1/4 acre behind the sand dunes in Wambro Sound WA. I used to spin wool for Megg in the little flat above the Commonwealth Bank near Vic. Markets when the two of you used to hitchhike around Vic. doing research for Megg's thesis on crofters' cottages. Still remember David's weird and wonderful concoctions in the wok as I spun lumpy (to excess) wool for Megg's wall hangings, never forgot your kindness to a lonely West Oz out of depth in Melbourne either!

My block now has a beaut vegie patch supplying surplus for my freezer; banana passionfruit clustering all over the wired in chook run; 50 or more guinea pigs roaming to mow the lawn; 30 x 5 gal drum herb pots; almonds, peaches, nectarines, apples, 2 pears in pots, lemon and mandarin in tubs, macadamia, mango, pawpaw, pineapple guava, feijoa, strawberry guava, 4 baby blueberries, 3 pecans, mulberry, fig, 3 types of banana, black passionfruit — all grown on what was beach sand, transformed by layers of newspaper and neighbours' lawn clippings plus my Muscovy and bantam manure and lashings of seaweed. I aided the introduction of earthworms by digging 4 armpit deep, armspan wide pits filled in with seaweed and pig manure and a few measly little worms. Now my garden has big fat earthworms.

SLATERS are a pest though as they attack the strawberries and zucchini and any tomatoes touching the ground. Any ideas? I hesitate to use commercial bait as many native birds eat slaters. I love birds, (free, wild ones). Cats have been a pest killing ducklings, kids, guinea pigs and chickens, also a few of my tame wild birds (very distressing). I have a 2 1/2 HP pump and water all my yard from it. My kids helped rig up the system, they even dug the 26' well. My eldest now 15 goes to BONEGILLA in Vic on 11th Jan (army). Does anyone live in the area? I'd love to correspond with a view to developing contacts for him in the community. He will be doing 6 years electronics apprenticeship and is very keen to help on farms and is a very versatile and intelligent lad who enjoys intelligent conversation and chess. He has had experience working on a friend's mechanised carrot farm tractor driving, plus mustering cattle, and fencing.

Love to correspond with people in the area round Bonegilla as I know nothing of the environment there. God bless and keep up the good work.

Sylvia Stonehouse
C/- PO Box 315
ROCKINGHAM 6168.

Here are some suggestions for control of slaters. Try placing (cut side down) either citrus shells or halves of hollowed out large potato with a notch in the side around garden beds to attract them. Planks or boards can also be used in this way. Check regularly and destroy — one way is to pour hot water over them. Sprinkling ammonia around problem sites should discourage them.

Some references that may be helpful to readers are:

'Natural Pest Control', Bruce Chapman, David Penman and Phillip Hicks, (Nelson).

'The Garden Pest Book', Bruce Chapman, David Penman and Phillip Hicks, (Nelson).

'Safer Pest Control for Australian Homes & Gardens', Paul Rogers, (Kangaroo Press).

'Pests, Predators and Pesticides', Jeanette Conacher, available through the Organic Growers' Association of WA, PO Box 213, Wembley 6014.

'Pesticides and Alternatives', published by the Brisbane Organic Growers' Group, PO Box 236, Lutwyche 4030.

Dear GR Readers,

Well many mags down the line we finally decided to drop a line. Clint (26), myself (Dina, 25) and Juan (2) have been living on our 7 1/2 acres for almost a year. The going is slow but hopefully the place will be 'modernised' enough to sell and buy at least 50 acres, build a mudbrick house and get down to some real living. Just a few questions — any good homebrews against GRASSHOPPERS especially for our palm trees which we raise? Any remedies for HAYFEVER (eyes, nose and a bit of chest congestion) for Juan and myself? And finally our DAM SITE. We have a valley block — 3 main gullies converge into one spot (a fantastic dam site). Twice dozers came to dig and twice sank 10 ft into invisible mud. Is this a spring (no flowing water but continually damp) or just continual seepage? Do we need a larger dozer or swamp dozer or excavator or both? We have had so much conflicting advice, only agreeing that it is a great dam site. Hope to hear from some local readers too.

C & D Goebel
Lot 43 Reserve Rd
UPPER COOMERA 4210.

Feedback Link-Up Feedback

Dear Megg and David

I missed paying for my renewal subscription mainly due to the fact that I am going through a difficult period of adjustment. You see my wife died last April, suddenly from a very severe heart attack, with absolutely no warning whatever. My wife had been following her usual very busy way of life right up to the day of the attack, so the shock was very great. We had been married for 55½ years and had only recently moved from a much larger place in Victor Harbor to this very practical small house with a large productive garden which kept us well supplied with fruit of all sorts, vegetables galore and flowers to beautify life. We had added a large shade house connected to an outside room which was to be my wife's studio as she was an artist of many years standing. We thought we were set for another ten years at least, as we both came from long lived families. An ideal place for two, but now really too much for one. We had always been interested in community living but had never taken the plunge unfortunately. We had investigated a few, but by correspondence only, as they seemed too far to visit, so nothing came of our enquiries.

I'm carrying on by myself for at least another 3 months which will complete the year since my wife's death, having visited various retirement villages which although good in some ways don't really appeal. They are too formal and regimented, with very small garden space for the individual. Besides they are generally in suburbia and I much prefer country living. A log cabin on five acres was really my choice but we compromised and continued in Victor Harbor when we moved in August 1985. There is an unspoiled beach only 10 minutes away.

Life has been full and enjoyable, but mostly work and very little play, so that now bowls and bingo don't appeal. I'm fit and active and feel I have much to share with others, in the years that are left to me. We once ran a goat dairy with 16 milkers for several years coupled with a small cherry orchard, but both parttime. During that period I was Federal President for the Australian Goat Society for a couple of years, while my wife was President of the local CWA Branch. We were both foundation members of the Australian Soil Association. Then came a long stint as a ranger for the Moorunde Wildlife Reserve to conserve the hairy nosed wombat. This was at Blanchtown and had to be given up when the distance became too great. However, I am now in charge of a small nature reserve for the National Trust, South Coast Branch of which I was once President for 5 years. Yes, as you will see, a very busy life, especially as my wife had been made a life member of the CWA for her work as arts tutor which meant taking painting schools all over the state.

My family is large and help all they can, but the nearest is 89 km away, while others are much further, Berri, Whyalla, Canberra, Cairns and Darwin. We migrated to Australia in 1948 with four children, 3 of school age. Now there are 16 grandchildren and 9 great-grandchildren — rather awe inspiring when one realises one's responsibility for that mob.

So, what's to be done next? ANY IDEAS? Please don't think I am complaining, or want a shoulder to cry on. There must be many others in similar circumstances and many not in good health. I have come to regard *Grass Roots* as an extended family searching for solutions. Time I brought this screed to an end, probably far too long and in the morning I may even tear it up.

Best wishes to all at *Grass Roots* and may 1988 prove an excellent year for us all.

Jack H. Williams
11 Riverview Rd
VICTOR HARBOR 5211.

Dear Megg and GR Readers,

Although I've read your magazine for some time now, this is the first time I've written in. We are an ex-Sydney family now living in this beautiful area. We have been here 2 years and are presently running some beef cattle, a dairy cow and chickens, thus supplying ourselves with meat, milk and eggs. We have a vegetable garden with a small orchard. Also sharing our acreage are 4 horses, 2 dogs and 3 cats. Both my husband and I work fulltime at outside jobs to help pay off the mortgage but our dream is to be as self-sufficient as possible. To this end we intend to purchase some sheep, pigs, bees and ducks. Is there a reader who could give us advice on what BREED OF SHEEP would be OK for our area and their special needs, e.g. shelter and feed. Also any tips on caring for DUCKS would be appreciated. I will reply to all letters in time and would love to hear from anyone with ideas on self-sufficiency — maybe older country women who have already 'been there'.

Anne
C/- PO Box 5
BULAHDELAH 2423.

Dear People,

After a year of searching for the land of our dreams in WA's southwest, we are heading for TASMANIA where we've heard the grass is greener, the people are lovely, the environment is relatively unpolluted and there is a chance of finding a scenic farmlet with good soil and water for under \$50,000 within commuting distance for a part-time medical social worker (David). We know some of the ins and outs of what to look for in WA conditions, but we're very green greenies when it comes to Tasmania.

Our ideal would be a community (or with neighbours) who are spiritually oriented vegetarians having a permaculture/organic relationship with the land in their safekeeping. But, we're at an exciting time of change in our lives and we're open to many possibilities. We'd love to hear from anyone with advice, cautionary tales or friendship in mind, or even ideas of where to look for land. We're also willing to lend a hand on other farms for experience and to get a feel for the place.

Trishala, David, Robi and Govinda Shuls
C/- GPO
LAUNCESTON 7250.

Dear Grass Roots,

Hi, been into your great magazine for 12 months now. Look forward to each issue. Just purchased 5 acres of land near Gympie Qld, and I want to build a post and beam, split level mudbrick home on it. Would love to hear from anybody in the area who is building in MUDBRICK. I am currently living in Brisbane and travel up to Gympie every chance I get. See you later.



Michael McNamee
20 Gareel St
JINDALEE 4074.

Dear GR,

I have just become a *Grass Roots* nut since reading No. 64 Dec. 87 issue.

I was particularly interested in B.M. Mansfield's comment in Feedback regarding eating your own SNAILS — so much so that I was moved to try a snail recipe that I cut out of the Melbourne Sun — Friday Nov. 21st 1975, p. 9. I cultivated and prepared them as per the instructions except that I fed them an extra 3 days on bran before starving them for 3 days. The friends who declined my dinner invitations and my wife, 2 eldest sons and my daughter who were 'elsewhere' on the night will never know what they missed. My youngest son, (who at only 12 years old has obviously an undeveloped palate for exotic foods) ate a couple but I downed 3 dozen and then washed them down with what was left of the brandy. Not only were my escargots as good as the 'real thing' that I ate in France some years ago but I felt a great sense of achievement in having finally plucked up the courage to eat my own backyard snails.

Thank you for a great magazine.

Keith Upward
4 Stewart St
THOMASTOWN 3074.

Dear Folks,

We are currently trying to gather information about how to build a MUDBRICK HOUSE: all aspects of construction starting from scratch and how much it costs for such a house. What type of soil is more suitable? Do local council requirements alter from shire to shire? We have had no experience in building so if any readers could help with information and the best climate to build, we would love to hear from you. In anticipation of all answers.

Derrick and Margaret Shanks
PO Box 1039
PENRITH 2750.

Derrick and Margaret may find the 'Earth Builders Companion' by John and Gerry Archer, available from Night Owl Publishers for \$7.50 posted, a useful reference book for their mudbrick building.

Dear Grass Roots Readers,

I have recently returned from a great holiday in New Zealand and noticed a number of NZers involved in BONE CARVING. I am very intrigued with this art and am anxious to know more about the materials and tools required to 'get into' this great craft. If anyone knows of any articles or books which could help me I'd be very grateful.

Ness
3/8 Church St
TOWNSVILLE 4810.

Feedback Link-Up Feedback

Dear GR Readers,

Would anyone be able to supply me with a list of all the different types of HONEY, and also has anyone got some natural recipes for slices or biscuits using honey instead of sugar?

Also I'd like to correspond with any single 'Born Again' Christian girls that are 18 or over. I'm 19 and a 'Born Again' Christian and I'd be glad of a good friend to write to. Thanks for a great mag and special thanks to Megg for her 'down to earth' *Gumnut Gossip*.

Debbie Scott
PO Box 759
ARCHERFIELD 4108.

Dear GR People,

Phil! and I need some help! Knowing how many resourceful people read and contribute to *Grass Roots* we thought we might see if any of you have a solution or suggestion for our problem.

Last winter we had our dam deepened and as a result of the digging we must have tapped into a salty underground stream as about a month ago (late January) our WATER became TOO SALINE (800 grains) for use on our garden, in our orchard or for our smaller animals and poultry. After the initial depression had subsided and ideas of moving had at this stage been shelved we started to look for a solution. We have contacted several companies that manufacture desalination units but as they are very expensive we would be most interested in hearing from any readers who have used or seen one operating. We would also like to know what people do with the salt that is filtered off. Any first hand information that anyone can offer would be most gratefully received! As an alternative we would also be interested in communicating with anyone who has made or used an EVAPORATOR. We did read an article about using one in an old edition of *Grass Roots* but no figures were supplied of the amount of water produced per day. If anyone within 200 miles of Perth has either an operational desalination unit or an evaporator we would be particularly interested in visiting them.

To finish, if anyone has any alternative solution to our problem please contact us! We have a 30 tree orchard and a large organic veggie garden. Stockwise we have a large number of poultry, sheep and donkeys. I look forward to your letters.

Lindy Medcraft
Lot 101 Falls Dr
GIDGEGANNUP 6555

Dear Grass Roots Readers,

Can anyone help me to trace a missing person? In 1984 ULLA JOHANSEN wrote from Ravenshoe NQ suggesting that if a tape was made of *Grass Roots* magazines (in talking book fashion) it would be a boon to blind or visually impaired GR enthusiasts.

As I am considering recording part of Australia's most worthwhile magazine for a friend in WA I thought that I could include Ulla in my plans. However she has left Ravenshoe and I am advised is possibly living in a Blind Institution somewhere. Is anyone in touch with this lady?

Diane Catley
PO Box 1304
MACKAY 4740
Ph: 079-543-311.

Dear Grass Roots,

I would like to know if any reader has ever had a pattern to make an OLD FASHIONED SET OF BELLOWS for the fire. I would be most grateful for this information.

D Kueffer
33 Belgrave/Gembrook Rd
BELGRAVE 3160.

Dear GR Folks,

We are thinking of taking a CARAVAN TRIP about May 1988, and travelling both along coast and inland from Brisbane to Cooktown. We're vegetarians (but not fanatics), interested in fossicking, mountains and walks therein, music (not R & R), farming, organic gardening, philosophies, GR (but not contentious), alternate health styles and living, and many other odd things. We would like to call in on anyone en route who feels we may have something in common — or indeed, nothing: maybe we could learn something thereby! We're not young, are quiet, law-abiding in general; in fact, ordinary. Would be glad to hear from you. We play cards for fun.

Iriss Quigley
Zara Rd
CHILLINGHAM 2484.

Dear Megg and David,

I am renewing my subscription to *Grass Roots* as I do enjoy your magazine about your down to earth, down under people whom I loved when I was in Melbourne and Ballarat in 1943. My old outfit the 1st Marine Division will return to Australia in April of 1988 and I will be with them. It will be a joy to help you CELEBRATE your 200th birthday.



Fred E. Miller
3600 Victoria St
KANSAS CITY KS 66106
USA.

Hello Again,

Well, after my first letter into GR No. 64 I received about 10 lovely letters, all from very nice people. Restores my faith in human nature. I'm now living just south of COFFS HARBOUR in a self-contained garage. It's lovely here, lots of trees, fresh air and nice people.

I haven't found any permanent work yet. I have been getting some relief work in the psych. ward at Coffs Hospital though. That's been great, it's a small, very relaxed ward and the staff are really nice people. I'm keeping on to my dream of eventually being able to get my own little plot of land, or buy into a community. When I get permanent work (not if, must think positive) I'll be closer to achieving it. I'm feeling a lot healthier up here as well. I've almost cut out red meat — eating lots of fish and chicken and heaps of fresh fruit. Once again if anyone wants to write and say hello it would be great to hear from you, especially any readers around here. I find it difficult to make new friends myself, not being a pub or club person. Love and peace.

Ian Gardner
C/- Lot 4 Butlers Rd
BONVILLE 2441.

Dear GR Readers,

BEWARE OF SCHEMING MONEY HUNGRY LANDLORDS. We, Damian 24, Gianna 21, have fallen into a trap, being new to the private rental market. We left Berry Springs (60 km from Darwin) before the onset of the wet season, hoping to find a place in the country. We ended up being stuck in a house in the middle of Adelaide. It was horrible and noisy, after the serenity of the NT bush.

After a few months of searching we saw an ad in the paper: 5/6 bedroom house with 15 acres — \$60 pw. It sounded ideal. After numerous hassles, which is a story in itself, we finally acquired this ideal place to live (or so we thought).

We are situated 30 km from the nearest town (Burra). The land is infertile, dry and barren. This did not worry us at all as long as we weren't in the city. The house itself was filthy — we scrubbed walls and worked very hard cleaning before we even thought about setting up our veggie garden.

At the start of our lease the agent told us we had an unlimited supply of bore water. The landlord pays a neighbour for the use of his bore and pays annually for the amount of water used. As it turned out, a veggie garden was out of the question as it used too much water.

On the 15 acres are two of the landlord's horses, both are stallions and totally wild. We wanted to get some riding horses of our own as this was one of the main reasons we wanted land. The agent told us we had to write a letter to the landlord requesting the stallions' removal. Before the landlord even received this letter he drove out as we were having problems with the hot water. What followed was a horrible scene with the landlord saying that it was his land, it was not in the lease that we were renting the 15 acres and if we removed his horses he would not let us keep our own here even though it was advertised with the 15 acres.

After this we spoke to a lawyer who said as it was not on the lease we had no claim to the land. We could go to court for misrepresentation but we could not break the lease (according to the Residential Tenancies Tribunal). Not having the funds for a court battle we are stuck here until December paying \$60 pw for an isolated house with no land. I don't think it's even worth \$30 without the land. We are considering breaking our lease but that is a lot of money down the drain (bond, moving costs etc.).

So beware! Make sure you read the lease carefully before you sign. If anyone can help with advice we would greatly appreciate it.

Damian and Gianna Versteeg
'Wildildie'
C/- PO
BURRA 5417.

Feedback Link-Up Feedback

Dear Megg and Everyone,

Sydney Technical College runs an excellent evening course called 'SMALL AREA FARMERS' which gives heaps of practical experience as well as theory. The course is flexible and adapted to the interests of the students. There are also more intensive day and evening courses on all aspects of farming. Phone 02-217-3480 or 02-217-3688 for info. The EPI Centre in Enmore (02-512-175) offers various courses on PERMACULTURE, and is also included in the Small Area Farmers course (although not enough time is allocated to this).

Also in Sydney is a group called TREES ON FARMS which provides volunteers to plant trees on properties, usually west of the ranges. In return for a weekend of hard work, the volunteer gets to see a variety of working farms and pick up tips from the farmers, all in great company. The AUSTRALIAN TRUST FOR CONSERVATION VOLUNTEERS runs similar weekends aimed more at public land like National Parks.

Some simple remedies: baby powder (talc) will deter GERMAN COCKROACHES (the little ones that infest urban kitchens and bathrooms). Squirt into cracks and crevices, and along skirtings — works better than all the pesticide products (I tried them all in the cockroach plague in 1986). Also, for DOG AND CAT ITCH, use tea tree oil to cure the situation temporarily, but the real culprit is usually allergy to wheat (contained in all biscuits and tinned foods). The ideal diet for a dog or cat is fresh meat with cooked vegies and rice added. This goes for human allergies, too (a lot less meat of course).

I plan eventually to leave the big smoke and head west — maybe sheep and herbs. I would like to be part of a hard-working multiple occupancy group somewhere with permaculture and maybe meditation leanings. I would love to hear from any established groups who would welcome a willing pair of hands occasionally, perhaps with permanent residence in a year or so. Alternatively are there others in Sydney with similar aspirations who would like to meet occasionally?

Thanking you all again for the dedicated work that goes into producing such a super magazine.

**Lyn Henderson
24 Carlton Pde
CARLTON 2218.**

Dear Megg and David,

I have had quite a few replies to a letter of mine in GR 64, have made some new friends and answered all the letters I received, except one from VICKI WALKER on Magnetic Island. I lost the envelope with her address on it, could you please print this so Vicki won't think me rude and ignorant. Thanks for a wonderful medium for contact with so many wonderful people.

By the way my children's school asked for street stall items. As I am no sponge cake cook I dried some lemon grass and lemon verbena in the microwave (my husband had one before I moved here). Bottled them for herb teas, dried some lavender the same way and made some rosemary vinegar and parsley vinegar. I felt quite proud of myself, it's the first time I have produced anything from my lovely little fairy garden. Thanks for the inspiration.

**Julie Bell
'Myola'
BLACK MOUNTAIN 2365.**

Dear GR,

Are there any readers who would like to correspond on the subject of AGRICULTURAL RADIONICS? Unfortunately my knowledge is limited and by corresponding I hope to learn enough so that I can put radionics into practice.

I'm currently picking grapes for a friend whom I met in the permaculture course, held in Melbourne two weeks ago. That course was something. If anyone is interested or contemplating doing a permaculture course, I urge them to go ahead and do so. It's really worthwhile.

Here on this property it's almost all vines (15 acres), but around my tent there are many other food trees: almonds, oranges, figs, grapes, carob, prickly pear. In fact I could (and am currently doing so) live off the place without needing to buy anything from shops. Does anyone have a recipe or alternative use for carob pods?

The work is hard, but I'm doing fine. Thanks very much for a great mag. The wisest of luck to all.

**Rob Taylor
37 Kavel St
TORRENS 2607.**

Dear Grass Roots,

I am an avid reader of your magazine and have been for some time. I always look in the Grassifieds but find there are few ads for house/land for rent or sale in WA. Does this state not have GR people? If not could someone drop us a line and let us know why there are no such advertisements. We hope to be in WA in a few months, looking to settle on a few acres. Any information would be much appreciated.

**The Ryans
C/- PO
PALMERSTON 5787.**

Dear Megg Miller,

Thank you for putting together the wonderful magazine which has given the SEED SAVERS' NETWORK its core group of hard workers (reliable too!). It is true to say that amongst your readers we have found many gardeners who have saved all those years some very valuable fruit and vegetables, herb and flower varieties. They come in every week as we sort the mail. Just a minute ago I opened a letter from an elderly gardener who has been keeping a 'wild tomato' (cherry type) and a climbing white lima bean since 1946 — my year of birth incidentally. 'I only visit them at harvest, they both self seed', she wrote. Since we started 2 years ago, many good seeds have been exchanged in the network and outside of it, for the welfare of all concerned, we hope!

May I add at this point that *Grass Roots* would be an exceptional place to air views for conserving what is left of the OLD BREEDS of CATTLE AND POULTRY and other domestic animals. With contaminated meat products on the market it seems urgent to keep domesticated animals with reasonable resistance to diseases, worms, etc. alive. To many of us growth rate has to come second to hardiness. Some of the readers might be able to give us information on such groups or individuals already doing this job.

Things, good things, have happened at such a fast pace at the Seed Savers that we did not manage this year to grow nearly as many varieties as last year and save the seeds to pass on. We only planted 25 out of the 40 plus varieties of beans we had, and only a dozen or so sorts of tomatoes out of the 85 plus named varieties we saved last year. We need more serious growers for seeds.

**Jude and Michel Fanton
Tuntable Falls
PO Box 24
NIMBIN 2480.**

Dear Earth Folk,

We are a New Zealand pair, with a dog, who would like to hear from MUSICAL MINDED ALTERNATIVE PEOPLE with the view to setting up a community somewhere between northern Victoria and Northern NSW, not too far from the coast.

We're into universal love and communication, good conversations, nature, alternative education, smoking, drinking. We're developing our music in harp, guitar, singing and like blues, rock and a wide variety of sounds. We have a van and are keen on travelling to meet you after the tobacco season finishes here in early May. Our mail will be forwarded on. We are both 25 years old. Also if anyone has any information about BUILDING UNDERGROUND homes, GEODESIC DOMES and/or economical building methods we would appreciate your help.

Thank you *Grass Roots* for your communicative magazine. We are one.

**Maree and Guy Hudson
C/- PO
MYRTLEFORD 3737.**

Dear Grass Roots,

Thank you for your informative and interesting magazine (helpful goes without saying).

We have a few acres in the range behind Caloundra. We don't have much money though. Does anyone know if it's possible to build a FREEFORM CONCRETE DWELLING? Is living in concrete safe? We have hillsides and flat land to choose from. We also have some rocks. Can ROCKS be used in fireplaces or will they explode? Can rock walls be kept clean? Love to hear from any who will help and also any in our area. Perhaps we could visit to see how alternative living to any degree is done.

Thank you and best wishes to all.

**Jan and Rudi Van Der Wey
88 Landsborough Pde
Golden Beach
CALOUNDRA 4551.**

Feedback Link-Up Feedback

Dear GR,

We are a family of 3, myself Linda 31, Ashley nearly 5 and Shaun 2. Ashley has emotional, BEHAVIOURAL and learning PROBLEMS. He's quite a handful, always loud, aggressive and violent, or hysterically screaming, crying and upset, very rarely quiet or peaceful. Discipline is a big problem also. I have tried diet therapy, taken him to naturopaths, child psychologists, everything I can think of but nothing has really helped him. This year he is attending a child care centre, kindergarden and having speech therapy in an effort to get him ready for school next year. If other parents have a child like this and have found anything that helps, I'd love to hear about it.

Shaun was diagnosed last year as having VON RECKLINGHAUSEN'S DISEASE, or neurofibromatosis. His condition is not curable, he can develop tumours anywhere on or in his body along his nervous system. He has a tumour growing along his optic nerves inside his brain, and in the last few months his sight has deteriorated to the point where he is now blind. He is often upset and in pain, he sleeps poorly and needs constant attention and supervision. He is able to walk, but cannot stand himself up and needs someone to follow him around to stop him crashing into walls and furniture. He doesn't speak and has general delayed development. The drugs he takes to control his fits make him tired and doxy so there are long periods each day when he just cries and cannot be consoled. An undisturbed night's sleep is a dreamed of luxury, we have no daily routine, we can only take each day at a time and enjoy the times he's happy and smiling.

If there are any parents with children with Von Recklinghausens or adults with the disease, or parents of blind or visually impaired children or children with brain tumours or brain damage — if you'd like to write perhaps we could support and help each other.

We are not looking for sorrow or sympathy. What we want and need is friendship and understanding so if anyone at all thinks they could bring a little sunshine into our lives, please write. All letters are welcome and, given time, will be answered.



**Linda Buckland
C/- PO
BALLARAT 3350
Ph: 053-359-493.**

Dear Megg and David,

I am writing to offer a solution we have found helps against LEECH ATTACKS. (Brenda Darley GR 65) Smear your feet/shoes and legs with Dettol. It seems to repel them! I don't know if other antiseptic solutions work but Dettol has proved itself with us.

**Prue Powell
HAMILTON 3300.**

Dear GR Staff,

I have recently read an edition of your magazine. Thank you for a very interesting publication. Through yourself or your readers I would like to gain more information on PISE (RAMMED EARTH) BUILDING. It is my intention to construct a house with this method, therefore any information would be of assistance. Perhaps a reader is in the midst of building using this method. I would like to lend a hand and gain some first hand knowledge.

**G R Kaylock
PO Box 100
WAGGA WAGGA 2650.**

Dear Grass Roots Addicts,

I wonder can anyone tell me where to contact MIKE PANTIC? He tried to contact me in October '82, and by a strange fate I have only now had the letter made available to me. It was a letter asking for help and was in need of being answered. Any information would be appreciated. Thank you.

**J. Hilton
'Aberfoyle'
VIA ARMIDALE 2350.**

Dear Megg and David,

I was only introduced to *Grass Roots* last year but I have bought a lot of back copies. While not a true GR person I love your mag. I live on 6 acres and have ducks and chooks, horses, dogs and a cat and 4 grown children, but after having a bad car accident last year I will have to move to a normal size block as I can't manage anymore. Thank you.

**Mrs M Cooper
55 Wills Rd
MACQUARIE FIELDS 2564.**

Dear Megg and David,

Thank you for such an informative magazine. I have been buying this mag for 9 months now.

I am writing in regard to the article about BUSHFIRES, by Joan Webster (GR 65, p. 18). I have been involved with fires for 7 years, and am the captain of the local bush fire brigade in the Port Stephens shire. The shire is made up of small residential areas bounded by large scrub and bushland, so it is a high risk bushfire region.

Year after year houses are placed at risk by large fires: the residents of these homes have always stayed to protect their properties, and by doing this they have saved their homes. Bush fire brigades and their members try to do the best in the community to protect from bushfires, but they can only be in one place at a time, so we urge residents to stay and protect their homes.

**Gary Seaman
8 Avenue of the Allies
TANILBA BAY 2301.**

Dear Friends,

PRICKLY PEAR season is here again. I love the fresh fruit and so have persevered over the years with picking and peeling despite the fine prickles that get into everything. Fortunately a Maltese friend had the answer and it's so simple. Take BBQ tongs and a bucket of cold water with you. Pick the fruit with a twisting motion and place them straight into the water where they are left until you are ready to deal with them. The fruit can then be picked by hand and peeled, as you would a banana with no ill effects.

I wonder if anyone has a natural answer to the problem of TICKS ON DOGS rather than the usual dogwashes available. Thanks for your help.

**Airlie Thomas
PO Box 37358
WINNELLIE 5789.**

Dear GR Readers,

At the start of this year, we had a camping holiday in Cowra on some land that friends of ours had just bought. We enjoyed it so much that we sold our car and put a deposit on the 120 acres next door as soon as we got home. We previously had plans to move onto one of those 'estates' in the western suburbs, because there didn't seem to be any alternative with what little savings we had. Now we know we can fulfill our dream of having our own little farm, even though it will take a few years longer to get there.

At the moment we rent a house in a beach suburb, which the locals in Cowra think we're mad for leaving, but all we want to do is get away from all these people. Though we're not 'beach people' (you can't fit onto the beaches on the weekends anyway) we enjoy walking our dogs down there at night. They love the water, but they will have to make do with a dam in the future.

The reason for this letter is to ask for some help! We have no experience whatsoever in farming, so we are doing a correspondence course (TAFE) in Husbandry of Farm Animals and are particularly interested in pig farming. Also, we intend to build our own house from the pine forest on our land, could anyone help us with ideas and experiences or suggest books on HOUSE BUILDING or PIG FARMING. My fiancé is a plumber, and he has had experience in full renovations of houses.

Thank you in advance, and congratulations on a great magazine, essential for us greenies.

**Becci and Rob
62 Ewos Pde
CRONULLA 2230.**

Dear Megg and David,

My husband and I would greatly appreciate any help your readers may be able to give in relation to our 7 year old daughter's ALLERGY TO ANT BITES (i.e. jackjumpers). Symptoms are very rapid swelling around the eyes, nose and upper lip followed by an itchy rash all over her body. We have used an anti-histamine which has helped somewhat but we are really looking for a cure for the reason why her system doesn't cope appropriately. We would welcome any suggestions, especially in the area of alternative medicine.

In the meantime, thanks to you both and your staff for an excellent magazine, it is a real 'tonic'.

**Pam Vescovi
Leam Rd
HILLWOOD 7252.**

BUILDING

One Woman's Way

We've shared the experiences of many homebuilders in past issues of GR and learnt from their successes and failures, but without exception these stories have come from male builders or couples in which the male has taken the active and more dominant role. It is immensely satisfying then to see two owner builder articles in this issue from women builders. On page 22 Fiona McIlroy writes of her pursuit of the perfect earth floor and below

Linda Woodrow discusses the pluses and pitfalls of building her own house.

by Linda Woodrow, Black Horse Creek, NSW.

I have just moved into my very own, homebuilt, mortgage-free, solid, beautiful (even council-approved) house. I feel very proud of myself. We're a rare breed, we women owner-builders. Two years ago I was a homeless single mum, wondering how long the money I had laboriously saved would take to disappear in supplementing the pension just to pay rent. I was in a better position than many — I had \$8000 in the bank. But that was it — no tools, no building skills, no assets. The rest of my possessions fitted easily into a backpack.

It can be done. To all those single women postponing 'The Move' till Mr Right happens along — it can be done. It takes patience, endurance, and work, but no superhuman qualities. There is no one 'right' way to approach building, but in retrospect, I think the process for a woman is different enough to deserve some notes of its own.

The most difficult part of the whole process is making the decision. Very few male owner-builders have any special skills or aptitudes that are not easily accessible to women. What they do have is confidence, born of a knowledge lurking at the back of their minds since childhood that this is part of their culturally expected skills. In the same manner, the task of preparing a three course meal for twenty would, for most women, be scary but not inconceivable. She would know where to look for recipe books for that kind of thing, and have a level of subconscious awareness of the quantities needed, the properties of ingredients, the times different dishes take to cook. Since childhood she has probably been noticing, aware that cooking is something she is expected to be able to do. This is the way men pick up building skills and confidence.

Once you make the decision, almost without conscious effort, you begin to notice. Doing the washing under my mother's house, I found myself looking up at the floor joists, noticing how big they were, how many, how far apart. Washing the vegetables at the kitchen sink, I watched the contractor building a deck next door, counted the shovels of sand, cement and gravel in his concrete mix, noticed how deep the foundation holes were, took interest in the triple grips he used to fix joists to bearers.

At first the very idea of building was intimidating. But pretty soon I began to realise that if you break the process down into its component parts, it is all quite logical and often self-evident. Like cooking, once you know the properties of a few basic ingredients — eggs bind, self-raising flour expands, joists sit on bearers, noggin's keep studs from bowing — you can use them in a bewildering variety of ways. And if you are stuck for specific items of information, there are available on the library shelves mountains of books you have no doubt



The basic frame and the rest of the cladding already up, and doors and windows to go before we could move in. Deck, verandahs, bathroom and pantry have been added since.

never even noticed the existence of before.

So that's the first piece of advice — make the decision, deeply and definitely, believe you can do it and you will find that without any more conscious effort it will begin to look less intimidating.

The second advantage the average male aspiring builder has over his female counterpart is at least an elementary level of skill in using tools. His hands know, even without engaging his brain, which way screws turn and how to hit a nail so it doesn't bend. There are books to tell you the theory but, like making scones, you need practice.

However, unless you have no other way to get your hands on a hammer and saw, don't race out and buy them. The old adage that a bad workman blames his tools is both true and not true. The adage that if it doesn't come easily, you're probably using the wrong tool, or using it the wrong way, is more useful. I was three-quarters through building my house before I stopped blaming myself for not being able to use a saw and started to look at the saw I was using.

The books say a saw should be used with the wrist straight in line with the forearm, the stronger upper arm muscles rather than the forearm ones doing the work, and the full length of the blade should be used. I am a medium sized woman, but much smaller, with smaller hands and a shorter reach, than the average man for whom saws are manufactured. When I stopped swearing at my own incompetence and began watching myself use a saw, I realised that, firstly, when my wrist was in line with my forearm the handle of the saw rested against my thumb, rather than nestling nicely between thumb and forefinger the way it is supposed to, which resulted in a

much weaker grip and my thumb being bent back with each stroke. Secondly, with my shorter reach, the only way I could use the full length of the blade was to move my whole body. As soon as I found a saw with a shorter blade and a smaller grip (no easy job in itself), my cuts became much straighter and easier.

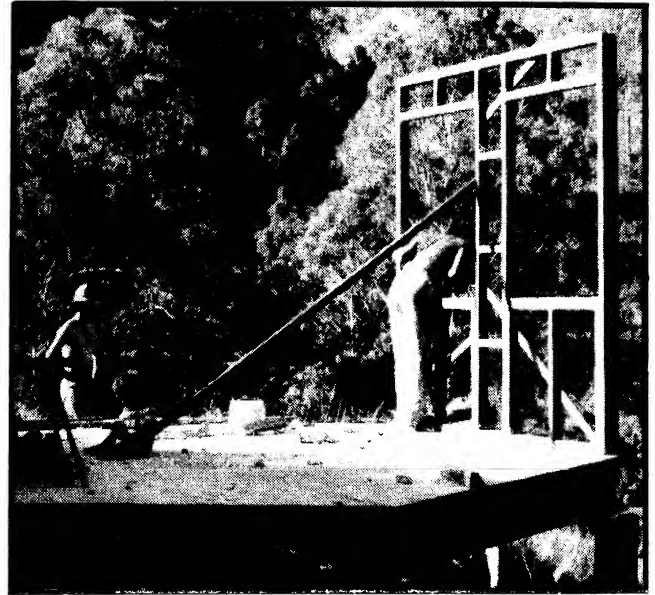
Similarly, I found myself 'choking' a hammer, at least partly because my hand moved up towards the narrower part of the handle where it could get a good comfortable grip. I didn't need a lighter hammer — to do serious building you need at least a 20 oz hammer, anything less will just bend nails — but I needed one with a smaller than usual grip. Tools are manufactured for men. Unless you are a bigger than average woman, it is well worth the extra time and money finding tools with smaller grips and shorter reaches than the average on offer. Hammer, saw, and brace and bit drill I found to be the worst offenders.

So the second piece of advice is: play with someone else's tools until you have an elementary knowledge of how they work, enough to be able to discriminate what feels comfortable. Then go shopping. Don't be too frugal or too frightened by how much you are spending — good quality tools that fit you are a major and essential part of your building budget. There are bargains — some Asian made tools that are not cheaper imitations of popular European brands are made for a smaller person, and occasionally good quality, well-loved, second-hand tools have a grip worn smaller with use. But generally the bargain tables at the hardware shops are to be bypassed.

If you don't have small children with an irresistible urge to chew power leads (which I did have), a generator and power tools make many jobs faster and easier, but it will cost a lot of money to get ones large and powerful enough. Hobby power tools are not suitable for serious building. I went through three power saws before I stopped buying ones too small and cheap to do the job. However, if you opt for hand tools, a twelve volt, rechargeable portable drill is a good investment. Brace and bit drills are not designed for people with breasts! When you have your own tools that fit you comfortably, it will be hard to stop practising using them!

The next step is to find a site and, although this process is the subject of many books on its own, there are some elements of site selection that are particularly relevant to women, the availability of helpers, and access among them. Building is one of those jobs that go much more than twice as fast with two people. The lack of someone to hold the other end of a piece of timber or pass up a tool can cost hours of jury rigging. As well, building is inherently dangerous and someone nearby in case of accidents is invaluable.

Very few men actually build alone. They have wives, girlfriends or mates, if not as full-time offsideers, at least available for those crucial stages. But for most women, if a husband or boyfriend was around, they would be the builder, and this would all be irrelevant. So my third piece of advice is: it can be done alone, and much of it can be done just as easily alone, but it will be much faster, easier and safer if an offsideer, however inexperienced, is available — at least occasionally. If you have friends, family, or children willing to be involved, begin building up credit points in favours with them! Otherwise, make 'people' part of your criteria for choosing a site. A



The first wall frame up — quite a momentous event. Building is faster, easier and safer if you can share it with others, even if inexperienced.

community with a philosophy of mutual aid, neighbours willing to trade labour, or another sole builder nearby are worth sacrifices in other aspects of the 'ideal' site.

I made too little use of helpers. Once I got started, I developed a very egotistical attachment to the idea of it being 'my' building. Most of the available helpers were men with much more confidence, and usually more skill than I had. Consequently I found myself lapsing into an offsideer's role whenever they were on site, letting them make the decisions and do the major tasks. So I made it difficult for myself by not trading labour or accepting help as much as I should have. Were I starting again I would probably either try harder to find another woman builder to trade labour with, or muster more assertiveness and confidence with male helpers, or accept the offsideer's role more gracefully. In any case, I wouldn't trust my two year old with the other end of the tape so often!

The other aspect of site selection that is especially relevant to a single woman builder is access. Choose a site that you can get a vehicle right on to, and spend whatever it takes to get good all-weather access. It is in transporting building materials that you are most aware of a woman's relatively lesser physical strength. Having to split bags of cement and carry the contents by bucket to the site because a full bag is just too heavy, or make ten trips from road to site with timber, as opposed to the five it might take a male counterpart, is just too time consuming and frustrating. There are just so many times when a vehicle's horsepower can be used to compensate for that lack of strength.

So far, you have confidence, the habit of 'noticing', some books, tools, helpers, a site and access. The next step is to move on to your site in a tent or caravan or whatever cheap and quick-to-erect temporary shelter you need. As all the books will tell you, you need to live on a site to be able to design a house that makes the best use of it — to notice where the sun rises and sets, where the prevailing winds come from, where the most frequently used trafficways are.

What the books don't tell you (being nearly all written by men) is that you need some level of basic domestic arrangements just to have time to build. If it takes all day to cook, wash up, organise a hot bath and wash clothes, you get precious little building done. On your own you can get by with a cold dip in the creek and a cheese sandwich but, especially with children, you will spend the first six months or more rigging up halfway efficient temporary living arrangements just so you can live on your site and still have time to design, let alone build, your house.

For most men this isn't a problem — they have a woman coping with the time-consuming domestic difficulties inherent in temporary accommodation. But if there's just you, or you and the kids, you'll run into the catch-22 that you don't have time to build a bathroom (which would make bathing a quick and easy job) while you're spending half the day organising a hot bath for everyone.

I bought a very derelict caravan for \$150 and spent three weeks, with a friend who knew better than I did what he was doing, rebuilding it. This gave me my first building experience and practice using tools. That part I did right. But then I moved my van on to a nice campsite half a kilometre from my house site. Throughout the next year, I set up, and pulled down to re-use the pipe, no less than six gradually more sophisticated water supply arrangements before I finally got hot and cold water connected to taps above a sink that drained through a plug. I spent several hours a day hand washing nappies in buckets because I wasn't going to spend time and money on a laundry on my temporary site. When I think of the amount of time, labour and money I spent on temporary domestic arrangements (or on doing without them) that were to become obsolete less than a year later, I could cry.

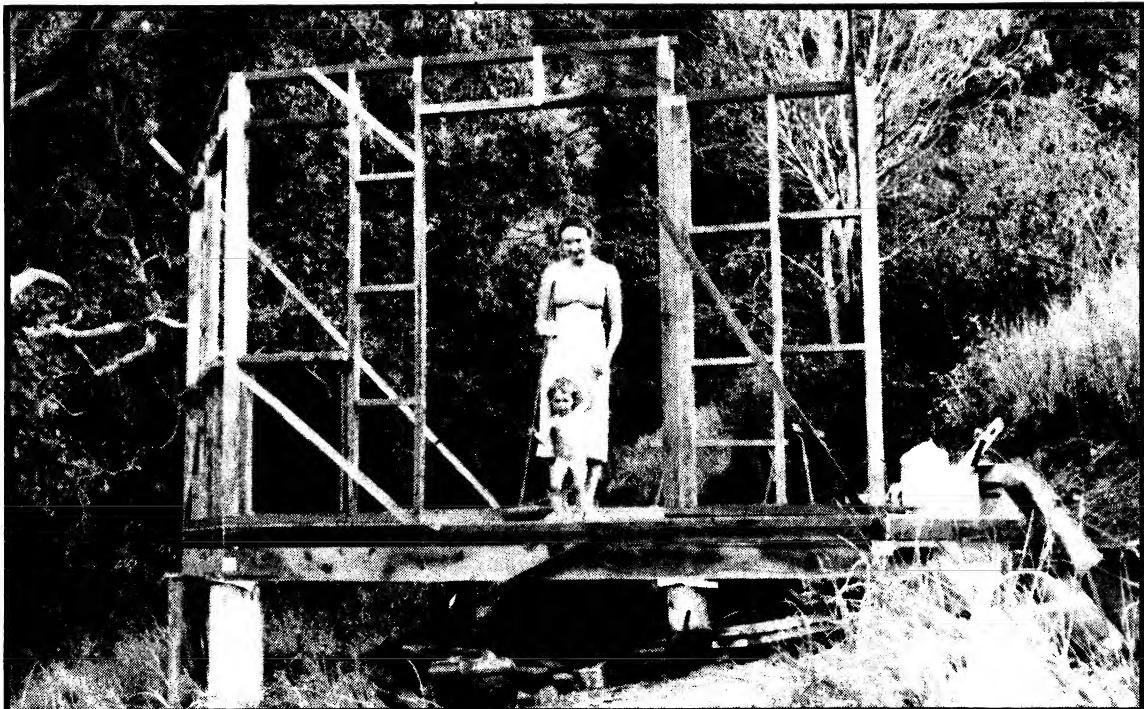
The conventional wisdom is that a building progresses through the foundations, frame, roof, cladding, and so on,

with the bath, laundry tubs, sink, stove and other fittings the last to go in. In retrospect I think a single woman builder, especially a single mum, has to start from the other end. If I was starting again, I would park my van right on my site and make my first water supply arrangement at least a start on my permanent one. I would use those few precious pockets of time available in the very early days to build a permanent, self-standing laundry and bathroom, adding the house on to it rather than vice versa. Then, with the few more hours a day saved from the chores of washing and bathing up my sleeve, I would build my permanent kitchen bench with sink installed, one that could be moved eventually into the still imaginary kitchen. Then I would put the extra time saved on food preparation and washing-up to use in building the stove alcove for my slow combustion stove, in its permanent position, with hot water connected. And so on.

Your priorities in domestic comfort may be different, and your design may not be amenable to quite this much staging, but if you keep in mind the principle of camping right on site and making as much as possible of your work count towards your permanent building, you will be well ahead of me!

The other benefit, particularly to women with children, of camping right on site, is that it allows you to make use of all those little pockets of time that are the majority of a mother's extra-domestic work day. Before breakfast, while the baby is asleep, while the kids are in the bath or the washing going round, waiting for the kettle to boil or the stew to cook, can all be used, if not for actual building, at least for planning the next stage, setting up a job, or packing up the tools. A main feature of traditional 'women's work' is that it can be done in little pockets of time — in contrast to 'men's work' which traditionally requires long concentration spans.

There is a catch-22 even in this though. You can't begin elaborating your camp domestic arrangements in a way that



The second wall frame erected. Pictured is a helper with my young daughter.

will serve your permanent design until you have a design. Besides site considerations, which take some time to really appreciate, if you are building on a very limited budget, your design will be influenced by what cheap building materials you can get your hands on. And you can't begin hoarding building materials until you have a shed to store them in.

So your first building project should be a shed. While this will give you confidence and practice using tools, it will have the disadvantage of prolonging the endurance test of how long you can cope with living in primitive conditions. Luckily this first stage is when your enthusiasm is likely to be highest, because it is also the hardest. The advice that time spent designing carefully will be repaid hundreds of times over, and that now is the time to go as slowly as you can stand whilst keeping the kids from sending you beserk in a caravan in the rain, is not likely to be welcomed!

The process of designing is again another story, but there are a couple of ideas particularly relevant to women builders. At least part of the incentive for the design I chose was that the biggest single piece of timber in it is a 2.4 m (8 ft) long, 18 x 7.5 cm (7 x 3 in) floor bearer which I can, if only just, handle on my own. For me, because I made the mistake of not having vehicle access right to my site, this was vital, but I'm not sure how important it would have been otherwise. After all, a man building a pole frame house is no more able than I am to handle the poles on his own.

However, I suspect there is a psychological element in that men are more accustomed than women to the idea of working in large scale. The only other woman builder I know has built in stone, again lots of small elements of manageable proportions, in contrast to the few large elements of the post and beam structures many of my male friends favour. It certainly made me feel more confident to know I could physically handle any single element of my building.

I don't know if there is any intrinsic reason for the size of standard mud bricks. I do know that all I have ever seen in fact or books are the heaviest that can be comfortably handled by the average man and too heavy for the average woman. I think the point to be made is that the books you will read on design principles work in construction elements evolved to suit the average size, strength, reach, and confidence of the average male builder. This doesn't mean that they are useless, just that you will probably have to adapt the information gleaned to suit your capacities. For example, if you plan to build in mud brick, you might have to find out why they are usually made to a particular size, and if for no other reason than ease of handling and construction, adapt your design to use a mudbrick you can more easily handle. My six foot male friend worked on my roof easily, happily and safely. I found the battens just a little too far apart for my shorter reach, so I was balancing precariously and working inefficiently and dangerously. If I was starting again, I would design more battens, closer together, to make my work easier and safer.

The other design concept particularly relevant to women builders harks back to the earlier themes of confidence and staging. My house is designed to be ideal for myself and my daughter. When I think about it now, I hoped even then that a mate would come into my life, and that there would be more children. And I believed that I was building a house to last a

lifetime. So why didn't I design a house to accommodate these future hopes? There was no need to stretch my resources by building it all at once, but, because of its roofline, my design is difficult (though luckily not impossible) to extend.

I think the main reason was lack of confidence. It was all I could do to believe I was capable of building a small house. So my final piece of advice is: don't bite off more than you can chew, but think big and confidently. Commit yourself to building only what you really need for now, otherwise you will put unnecessary stress on your physical, emotional and psychological resources. Living in a caravan is a good lesson in how little space you actually need. But design a house that can grow to accommodate all your future dreams and hopes. The only problem then, and one I have still not solved, is when do you proclaim it finished, and announce the long awaited housewarming party?

For a detailed list of discounted secondhand books on how to build houses, sheds and other structures from a variety of inexpensive and readily available materials, send a large SAE to 'Heather', PO Box 764, Shepparton 3630.

FREE Big Price List of interesting and unusual books. We specialise in Craft Books (including many exotic & unusual crafts), Self-Sufficiency, Environment, How-to-do-it volumes, Health & Food, Alternative Lifestyle, Leisure books etc. Dept. GR THE BOOK CONNECTION, P.O. Box 1463, Dubbo. N.S.W. 2830.

NEW AGE MUSIC

MUSIC FROM THE SOUL SENSITIVE AGELESS

An exciting collection of best selling music created to relax, inspire and uplift you.

**Send now for your FREE
Colour Catalogue of new
releases at discount prices.**

We guarantee you will like our music or your money back!



**NEW WORLD
PRODUCTIONS
P.O. Box 244, Red Hill,
Qld. 4059.**

AROMATHERAPY

by Gabriele Engstrom, Canterbury, Vic.

Aromatherapy has recently regained some of its early popularity and there is good reason for this. Not only is it very pleasant to work with this technique, but it is also very therapeutic for the patient on a physical, emotional and spiritual level. Aromatherapy is very versatile, you can use it as a medicine, beautification treatment, relaxant or stimulant, in regression (odours give you a recall of past experiences), and last but not to be forgotten, as a special treat for yourself or a dear friend.

When we consider the emotional side of our being, it seems that depression is rampant in our society. This is unfortunate, because the sooner people realise that worry and depression undermine our nervous and immune systems and this threatens our health, the sooner will they take steps to overcome this depression. Along with meditation, relaxation, flower remedies, massage, diet, mineral and vitamin therapy, aromatherapy is another modality to make your life happier and more relaxed.

But before I go deeper into the practice of this therapy, let me very briefly go into its history. Aromatherapy is thousands of years old. The Egyptians used essential oils for embalming, cosmetics, massage and as a medicine. Myrrh was by then already well known for its anti-inflammatory properties. The first people to use them were of course the priests; later it became a tool for the physicians of those days. The Jews used essential oils, especially myrrh, in purification rituals. Under Roman and Greek rule aromatherapy found great popularity. Even the Indian herbal texts, the Ayurvedas, talked about a wide variety of essential oils. Sandalwood, one of the best known, was used in beauty preparation, incense, and to anoint kings and high priests.

Why the fascination of essential oils? The oil is the essence or the blood of the plant (when carefully extracted). It works in harmony with the body, balancing the energies of the person treated. Used in combination with massage, polarity, reflexology or any other tactile therapy it is excellent, but the healing and energy balancing also happen when the oils are added to bath water or used in an aroma diffuser.

OILS AND THEIR USES

There is only space enough to mention a few of the many aromatic oils available.

Lemon Oil

One of my favourite oils is lemon oil. This oil can be used for a vast number of different conditions. Since I suffer from cellulitis (orange peel skin) I use a few drops in my bathwater — and, I mean just 2 or 3 drops, because if you add too much of this ingredient to the water (you know how we sometimes want to improve quickly and we think that by doubling the dosage that will happen) your relaxing bath will become very uncomfortable. Lemon oil is very strong and when it is too concentrated it will irritate the skin. I fell into that trap once and added about 8 or 9 drops to the water. The area with cellulitis was as red as a tomato and rather painful. I learnt my



Gabriele with her young daughter Nadia.

lesson quickly and realised that the oils are really very powerful. No need to add that I now have a high respect for them. Lemon oil also has excellent healing qualities. It has the ability to activate the white blood cells, which in turn improves the immune system. It works as a tonic for your nervous system, is a diuretic and has antiseptic properties.

Lemon oil is one of my favourites for skin complaints since it is cicatrising or healing. It also prevents wrinkles. Here is one of my most popular recipes for acne.

20 ml linseed oil

3 drops lemon essential oil

6 drops lavender oil

4 drops frankincense (optional, for mature skin)

Just dab it onto the afflicted area. This combination is helpful, especially for candida-based acne particularly with attention to diet, herbs, minerals, vitamins and the all important factor STRESS. This oil can also be used to disinfect wounds. The juice of 1 lemon in honey water is excellent for people with fever. I should also mention that it is an excellent fruit to help clean the liver and improve constipation. I would advise you to drink the juice first thing in the morning with lukewarm water. To help your liver along even more, mix 5 drops of lemon oil with 10 ml of massage oil and massage it especially over the liver area. I also use lemon juice to disinfect dubious drinking water. Just one more piece of advice about my beloved lemon. It is a moth repellent and rotten lemons seem to repel ants. I could write so much more about this wonderful fruit, and I am convinced everybody should have a lemon tree in the garden.

Clove Oil

Many people know that clove oil is used for toothache, because it is a natural anaesthetic. Apply it neat to the tooth. Apparently clove essence has opiate properties and at the same time it also has antiseptic properties. so, it is very

effective for healing sores, infected wounds or ulcers. Take a cup of water, add 5 drops of clove essence, shake well and use it to clean the wound. In the olden days clove oil was sometimes used to disinfect operating theatres and the hands of physicians or nurses.

Rosemary

This is another of my favourite oils. It helps to balance the emotions. Clary sage, geranium, patchouli and ylang-ylang are also excellent for this, but I'll talk about them later. Let us concentrate on rosemary oil for the moment. When I started with massage, I used to use a good vegetable oil with a few drops of lemon oil, which is uplifting and refreshing. The patients seemed to respond physically very well, but emotionally I did not get the right responses. Once when I started with rosemary, the energy just flowed so much more quickly and made my work so much easier, so now I use a good vegetable oil, rosemary oil as a base and then I add 1 or 2 different oils. Rosemary is excellent for overcoming general sluggishness and apathy. It also has the ability to clear the mind. Anybody who uses herbs knows that rosemary sharpens the mind, so clearly it is a must for students and older people. Headache and migraine sufferers will be pleased to hear that it helps to ease the pain, especially if tension is involved. It is a heart tonic and a mild stimulant. People with heart problems often have a lack of enjoyment, as if they squeeze happiness out of their life. Rosemary can help to restore this enjoyment.

If you're looking for a good massage oil that improves muscular and rheumatic pain, use peanut oil as a base, and eucalyptus oil and wintergreen oil and of course rosemary oil.

Last but not least, for those people who start losing their hair or have dandruff, mix 10 ml of olive oil with 9 drops of rosemary oil. Massage the oil into the scalp every night. Leave until morning, then wash it out with a gentle shampoo. Since rosemary is very stimulating and cleansing it will help to improve hair growth. Of course diet and other therapies should be used in combination with this therapy.

Peppermint Oil

Another favourite oil, although I do not use it very often, is peppermint oil. I have found it excellent for people who are always hot even when everybody else is running around in woollen jumpers. A client of mine was like this. As soon as she added a few drops of peppermint oil to the bathwater she felt so much cooler. Peppermint also has the ability to repel insects. You could make your own insect repellent oil:

- 25 ml olive oil
- 10 drops peppermint oil
- 5 drops pennyroyal oil
- 5 drops lavender oil
- 3 drops lemon oil

If you possess cats or dogs, just add pennyroyal, peppermint, eucalyptus and lemon oil 10 drops each to 1 litre of water. Mix well, then rub it into the fur of your animal. This should help your fourlegged friend to fight off fleas.

Clary Sage Oil

Clary sage is the favourite for women, as it is very good for period pains. Blend 5 drops in 10 ml of good massage oil and apply it on the tummy and lower back. Or use as a compress. Apply the oil when your period starts. This oil will also help

PMT, together with B vit and B6. Post natal depression is another illness many women suffer from after childbirth, due to hormonal changes. It can become very severe and people should take notice of a young mother who weeps easily. Here again clary sage comes to the rescue, used as a massage oil, in the bath or in an aroma diffuser.

Lavender oil

This is another popular oil which has many uses. People who are irritable or depressed benefit from lavender. It is excellent for the skin, and you can apply it straight onto your pimples. It can be used for headaches, although I prefer rosemary, is an antiseptic and is good for pulmonary diseases.

Part II next issue will describe other uses for aromatic oils.

Gabriele is a practising naturopath and masseuse with experience of herbal and flower remedies and many other aspects of natural health and beauty care. She provides a mail order treatment and counselling service for country people. For further details of the services available, fees and information required, contact Gabriele Engstrom, 29 Golding St, Canterbury 3126. Ph: 03-288-2103 or 03-836-2871.

The *Preventative Health Care Directory* is a free publication giving listings of natural health therapists around Australia. To obtain your copy, Ph: 03-818-7867, 03-758-5791 or 03-755-1568.

A correspondence course in aromatherapy is conducted by the Institute of Aromatherapy, PO Box 80, Lane Cove 2066. Students who successfully complete the 13 lesson course, covering all aspects of aromatherapy and associated natural treatments receive a diploma. Write for more details of course content, costs and requirements.

Herpes... can we help?

We are a group of people who gather for mutual support. We know how herpes can affect your life.

We know the shock, the anger, the fear, and the aloneness you might feel. We also know that most of this is born of misunderstanding and fear of rejection.

Our purpose is to provide accurate information and emotional support. We meet regularly, and it is all confidential. Let us know if we can help.

HERPES HELP

A SELF HELP SUPPORT GROUP
Write: PO Box 482 Paddington 4064.
Or Phone: Marilyn (07) 369 9876

SHEEP'S MILK

The Woolly Alternative

by Lindy Saler, Bellingen, NSW.

'Ugh! Sheep's milk!' the visitors used to cry when I told them that I milked my sheep. Now I don't tell them and they know no difference. It may not be everyone's cup of tea but, if not, it won't be because of the taste.

It all began when some friends asked us to keep our eyes open for a sheep as a lawn mower. We discovered one farmer who was selling ewes with lambs at foot for \$15. As we had no lawn mower we couldn't resist an old ewe with twins. We poked and prodded them into our panel van and off we went. Our careers as shepherds had begun.

Maisie and her girls were quite wild, consequently we were surprised at how easy it was to tame them — though not before several mishaps and chases over hill and paddock. One nocturnal chase ended with poor Maisie in a muddy creek with my husband and dogs on top of her and rain pelting down on them all. Initially we had them tethered on runs so they could perform in their new roles as lawn mowers. This made it easy to tame them. Now my little flock of six is in a paddock but I still tethered a recently acquired ewe until she learnt to come when called. Sheep, like people, have different tastes. Some like bread crusts, some don't, some prefer molasses, some grains. Almost all find lucerne irresistible and will do anything for it. It's a wonderful feeling to call them up and see my flock rushing over to discover what goodies I have for them today.

It didn't take us long to realise that our girls had other talents apart from mowing and fertilising our lawn. They could produce wool, lamb chops and lamb skin rugs. It took us longer to start milking them but, now we do, we've discovered that as milkers they have many advantages over cows and goats. Some disadvantages too, we admit. It would depend on your family's requirements as to whether you would follow in our footsteps.

Taste-wise I can detect very little difference to full-cream jersey milk — one advantage I feel it has over goats' milk. Sheep's milk, in fact, has a higher food content than both goats' and cows' milk and I have heard that it is as easy to digest as goats' milk. I haven't been able to confirm that but it came from a reliable source. Below is a table of percentage food value of the three animals' milk.

My man on the spot in the Animal Health Laboratory says the milk is relatively free of disease too.

Sheep are easier to handle than cattle for obvious reasons. It is easier to drag a sheep around on a rope than an unwilling cow and infinitely easier to throw it on its back if you so desire. Though fencing is more expensive than for cattle, it is cheaper and easier than for goats. Sheep don't need any



The redoubtable Maisie, whose lambs obviously swear by sheep's milk

shelter either.

A ram is less displeasing to the nose than a buck, eats less and is easier to contain than a bull. A further advantage is that a ram has a fleece, whereas a milk buck or bull doesn't.

As the sheep is a grazer, (though they are not averse to sampling the fruit trees) we don't bother to supplement their feed in any way, though a little dairy meal wouldn't go astray at milking time as an encouragement. Without this I still get over a litre a day from my regular milker. Milking goats however must have a supplement. 'Ah! Ha!' you say, 'only a litre, that's not much!' True, but it's ample for our needs. It wouldn't do for a large family but for two or three people it should be enough. You could always milk a second sheep if you needed more.

In our wet, warm climate we do have some trouble with foot rot and fly strike, but find if we are diligent in our hoof trimming the foot rot can be avoided. Fly strike is easy to get rid of. We just clip the affected area and, if needed, spray with an insect repellent antiseptic. Worms can also be a problem in this climate, but we're learning to use a system of drenching and paddock rotation to control that. Our local vet has suggested that we try natural drenches such as pawpaw seeds and garlic in between our regular commercial drenching. We're not sure how effective this is yet. If anyone has more information on natural drenches we'd love to hear from them.

If you consume only a small amount of milk, have limited land, already have sheep, enjoy eating lamb, spin — or all of the above — try sheep's milk. I think you'll be pleasantly surprised. Just don't tell your visitors what they are drinking.

Comparative food values (percentages)					
	Fat	Protein	Lactose	Ash	Total solids
Sheep	5.3	5.5	4.6	0.90	16.3
Cow	4.5	3.8	4.9	0.72	13.9
Goat	3.5	3.1	4.6	0.79	12.0

Controlling Pets' Fleas Without Flea Collars

Have you seen those TV ads with happy, healthy dogs and cats frolicking about in their brand new flea collars? The ads are clever. The pet owner is made to feel guilty if he neglects to buy one. The sad reality is — putting a flea collar on your pet is to transform the poor animal into a dangerous object, an object that is now able to affect not only the health of the pet, but the health of you, your children, or anyone who goes near the animal.

The three main chemicals used in flea collars are:

- Dichlorvos — organophosphate also used in some pest strips. This compound hits the central nervous system and kills fleas by short-circuiting the nervous system. It has also been indicted for causing mutations.
- Lindane — chlorinated hydrocarbon, more powerful than DDT and longer lasting; capable of causing leukaemia and other serious blood disorders.
- Tetrachlorvinphos-Dioxin — the most deadly man-made chemical in the world. This compound is absorbed through intact skin. It is capable of causing cancer, mutations, birth defects and neurological damage. It also accumulates in fat tissue, making chronic small doses exceedingly hazardous.

Recently a woman told me her cat died half an hour after she put a flea collar around its neck. Although I have asked many doctors if a child was brought in to them suffering from a neurological problem would they associate these symptoms with the possibility of flea collar contamination, none would. Yet, where does a child hang when hugging a dog? Where does a small child lay her cheek when she tells the cat how much she loves it? What does the toddler hold on to when socialising with the dog? . . . The collar. Surely every pet owner cares whether his pet is inhaling the poisonous fumes and perhaps suffering from a constant headache, respiratory problem, nausea, stomach upset, mental confusion, paralysis, convulsions, leukaemia or cancer. Surely no-one would knowingly expose his or her pet to such a possibility when there are other safe ways to control fleas.

ALTERNATIVE METHODS OF FLEA CONTROL

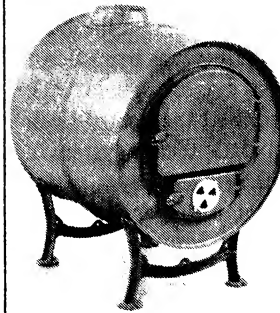
- The vacuum cleaner is the best weapon . . . pick up the eggs before they develop.
- Comb your pet with a fine comb and kill the fleas by quickly dunking the comb into the water if you aren't fast enough to squash them with your finger nails.
- Give your pet vitamin B (brewers yeast) either in tablet form or as a powder with its meal. Most animals love yeast.
- Garlic capsules can also be put in the food.
- Red cedar shavings can go in your pet's bed.
- Try a few drops of cider vinegar in food or drinking water.

Keep in mind the insidious nature of chemicals makes it very hard to trace back the cause when dire results manifest themselves. If all safe methods fail and you cannot cope with a flea problem, it would probably be kinder and more humane to have your pet put to sleep rather than condemn it to the questionable safety of any flea collar which could be a 'necklace of death'.

Thelma MacAdam, *Animal Liberation Newsletter*. Reprinted from *Natural Health News*, Nov 81, newsletter of The Natural Health Society of Aust, 200 Goulburn St, Darlinghurst 2010.

Be Warm & Cozy This Winter

At a cost you can afford



Republic HOT DRUM Slow combustion wood heater

Tremendous heat output.

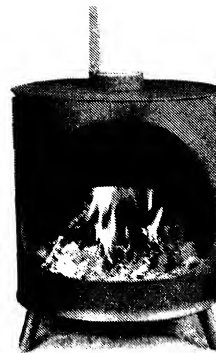
Circular shape for efficient heat transfer. 'Directed draft' design makes easy lighting. A roaring fire in minutes!

Steady heat all night long.

The large capacity firebox along with air-tight, gasketed door and precise draft control make for long steady burns. Wake up to that warm feeling!

Old-fashioned styling.

The traditional look of cast iron, along with the strength and durability of steel. Proven in Canada for many years.



Now Introducing FIRE DRUM

The free-standing open fireplace that is safe and easy to install. The 'charm' of an open fire is now possible in any room of your house. Much more efficient than a masonry fireplace. Unique 'forced draft' means easier lighting and no smoking! Heavy steel plate on top for a simmering kettle. Complete with firebrick lining and built-in firescreen. \$435

Buy direct from our factory and save.

No costly middlemen. We ship direct to your door by Comet Express, at rates that have been specially negotiated for your benefit. (ie \$32 for a Republic HOT DRUM anywhere in NSW)

We give better back up service than any retailer could. We manufactured the product so we know more about it. Each HOT DRUM we send out brings several more orders from friends and neighbours, so we value our reputation with all customers. If you have any problems you ring us collect so we can put it right.

All products carry a one year unconditional guarantee. If you are not satisfied we buy it back!

Kits for the do-it-yourselfers

Republic Hot Drum Kit \$105. All parts needed to convert a 44 gallon drum into an efficient and powerful wood heater. Assembly is easy, no welding necessary. Hundreds already in use in Australia.

Mini Hot Drum Kit \$65. Converts a 12-gallon drum into a popular size of heater. Mini owners soon develop a strong affection for this mighty little heater that lights so easily and burns so steadily.

Send for your free copy of **HOT DRUM NEWS** right now, and learn how these wood heaters could solve your heating needs at the right price.

The **HOT DRUM NEWS** also has information on water heating, fireplace conversions, central heating, installing a flue, and other hints for all wood burners. Also learn about **TIN CUTTER**, 'The 44 gal Tin Opener'. Designed for cutting 44 Gallon drums, it also slices through roofing iron as if it were paper. A very useful tool for any handyman.

Write to: **HOT DRUM, Freeport 1, Box 3(G), Maleny, Qld, 4552.**
(No stamp required) or ring: (071) 942496

A Useful Fodder Tree

by Leigh Davison, The Channon, NSW.

I first became interested in *Leucaena leucocephala* some three years ago when I read an article describing its use in the rehabilitation of eroded and degraded land in the Philippines. In this case the K8 (Hawaiian Giant) variety was being used. Some months later a friend showed me an article in a Queensland DPI Journal which described the use of bush varieties of leucaena as the basis for a cattle forage system in the Rockhampton area (23.22 S, 150.32 E).

In this system, leucaena was planted in parallel rows about three metres apart, and allowed to grow for several years with little or no grazing. By this time the trees were large enough to withstand serious damage from grazing cattle, and were mature enough to have produced several crops of seed. In the situation described, this seed had been allowed to drop and germinate in the spaces between the rows of mother trees. It was the carpet of leucaena seedlings that provided the main forage. The mother trees provided some forage from lower branches, but their main role was to provide seed for the replenishment of the seedling carpet.

THE EXPERIMENT

With the intention of trying to emulate this system, I purchased in August, 1980 1 kg (2 lb) of *Leucaena peru* seed (*Cunningham* was not then available in commercial quantities). That same month I had a bulldozer clear and contour-rip an acre of weedy hillside on our property at The Channon in the Lismore area of northern NSW (28.48 S, 153.17 E). The soil type on the plot is red to chocolate-red basalt. The aspect is north-easterly. The weed cover varied from relatively luxuriant *lantana* on the gentler slope, to crofton weed and poor quality *lantana* in the steeper areas.

As there was no rain during September and October, 1980 I was not able to sow the seed until the first week of November. I scarified the seed with boiling water and inoculated and lime-pelletised it. Because the dozer had left the area clean, and the soil friable, I was able to sow simply by dropping the seed into the furrows left by it.

I applied a couple of bags of dolomite, believing at that time that leucaena required alkaline conditions. I have since learned that any pH over 4.5 is acceptable. A bag of rock phosphate was also applied. As a cover crop I sowed cowpeas very thinly in the intervening furrows. This was a mistake, as the vigorously running cowpea vines were soon growing all over the leucaena seedlings, and I was kept busy all summer with the brushhook.

The leucaena struck well, and was helped by regular rainfall throughout the summer-autumn period. The strike was poorest on the steeper slopes where growth was also slower. It was interesting to note that there was little or no strike in the vicinity of a flooded gum which I had left standing. Those plants that did emerge near the gum tree have fared badly, indicating the existence of a leaf or root exudate that inhibits germination and growth of the leucaena.

After a year the better specimens had reached about 3 metres (10 ft) in height, with stem thicknesses up to 1.5 cm (½

in), and were flowering. The trees set a lot of seed, and I was hoping for a good secondary strike of volunteer seedlings in the spaces between the rows of mother trees. The wet season of 1982 was even better than that of the previous year, so my hopes were high.

However, there was little or no germination. I had noticed that many of the seed pods contained a white fungal growth and this must have rendered most of the seed non-viable.

THE RESULTS (1983)

The trees made good growth throughout 1982 with the customary pause during winter. In January 1983 I decided to slash the trees to about 1 metre in height so that the resulting regrowth would be within reach of browsing cattle. I performed this operation with a brushhook, and was followed down the rows by several eager cows. It was interesting to note that they preferred the succulent green pods to the leaves, which they also relished, stripping the limbs bare.

During this slashing operation, I noticed that the mature seed was generally free of the fungal blight so prevalent the previous year. This was no doubt due to the remarkably dry conditions in January 1983. It was, in fact, so dry that on that red soil slope the leucaena had dropped virtually all their leaves by the time the first rains came in mid-February.

A couple of weeks after this rain I returned to see how much leaf growth had occurred on the stumps of the slashed trees. To my delight, not only was there considerable growth in evidence (in contrast to the trees which I had not yet slashed), but also the long awaited carpet of secondary volunteers had begun to emerge in the areas where slashing had spread and opened the seed pods.

During the 2.5 years of this experiment I have had to spend time chipping and brushing weeds like wild passionfruit, wild tobacco and mistflower. This has had the effect of encouraging the reappearance of several grass species including *Kikuyu* which is, no doubt, benefiting from the excess nitrogen produced by the leucaena. The original ripping operation caused a solid germination of some dormant *siratro* (*Nacrottilium atropurpureum*) seeds. This vigorous running legume tends to cover the trees and pull them over. I have controlled this *siratro* by periodic grazing, as the cows prefer it to the leucaena.

From this experience it would appear that the rate of germination of the secondary crop of leucaena, so necessary for the realisation of the forage system's full potential, depends heavily on the amount of rainfall occurring in January when the seed is hardening up. January 1982 produced 350 mm (14 in) while January 1983, the year of high strike, saw only 50 mm (2 in) of rain fall.

I have celebrated the breakthrough by treating the area to a bag of blood and bone, to maximise prewinter growth of the understorey carpet.

I am planning to put in a plot of several acres in spring of this year. It will be on flatter land, so that weed control will be possible using my walk-behind type sickle bar mower, instead

THE PERFECT EARTH FLOOR

by Fiona McIlroy, Warm Corner, via Bonang, Vic.

Searching for the 'perfect earth floor' has been like looking for the 'Golden Fleece'; it exists in one's imagination, and in the paintings of Old Masters, but when one actually asks to locate a council approved, serviceable and beautiful earth floor, one often meets a 'brick wall'. In fact, I travelled from East Gippsland to Eltham shire, the home of muddies I thought, only to find out from the building inspector there was only one earth floor on their books, to be approved pending performance tests. I scoured the earth magazines of all classes, and found only two descriptions, more like recipes, which glided over the important details such as exact soil type, moisture level and drying period.

With such a dearth of tangible models, and so vague and varied a range of recipes, it is little surprise that most owner-builders give up their dream of an earth floor, and settle for a concrete slab. We almost did. Twice. But a persistent inner voice said to me: be brave. Try it.

Why did I want an earth floor? Firstly, I like the use of natural local resources. Our site has offered us heaps of earth for the walls of the building in cinva ram bricks (no cement). It feels right to do a floor with it as well. History is paved with earth floors, and there is no evidence that floors did not last with many of the buildings — for centuries. Cement is a Johnny-come-lately who has made himself indispensable in the building industry. It has become the password for strength, stability and durability. Cement, however, is expensive, and earth is, miraculously, free. Cement is usually stressful to work with, causing anxiety and time pressure because of its quick drying properties — one of its advantages also, of course. It also dries out the skin ferociously, and is a tiger in the eyes. Now, I must be careful here not to knock cement too hard. My knuckles might get sore, and . . . we were not brave enough to dispense with it altogether in our floor. Apart from anything, the sight of our building surveyor's furrowed brow relaxing a little was worth it.

To give him credit, we had no trouble having our earth floor plan approved. It was drawn up nicely in architects' ink, and apparently, there were no rules or regs to assess it with. I discovered, to my shock, that ours was the first earth floor approved in this shire. He seemed to feel that an earth floor was less dangerous than our native cypress-pine floor with insufficient ventilation under it. This timber floor was fought for through an engineer and the Referees Board in Melbourne, but in the end, the shire objections were sustained. It was pulled up board by board, and stacked for use later in the bedroom. Before this expensive timber floor was built, we had a red brick kitchen floor. Both of these floors pale before the present floor covered with hard-wearing cheap carpet. My two children are now six and four, past the worst age for spillage I suppose. I find a quick once-over with our swish little pet carpet-sweeper easier overall than the sweeping and mopping required for a timber floor. We can't seem to avoid bringing grit in from the site, so we didn't want to risk scratching the Estapol surface of the earth floor. We have left a couple of exposed corners, so that we can prove to visitors

ODE TO A FLAWLESS EARTH FLOOR

*O how did they do it before?
That perfect gleaming earth floor!
Was it blood, was it sweat, or tears?
Is it just the halls of Vermeer?*

*For years we chewed on our nails;
We paced over hill, and down dales.
Pictured it cracking, or chipping,
Imagined it flaking off dust.
If we'd only suspended our fears
and simply been grounded in trust . . .*

*Just bent our backs to the barrow,
Went down a board straight and narrow,
Turned our wrists to the trowel,
Worked into the night like an owl . . .*

*In a week we were over the worst,
Our egos ready to burst;
proud as we glowed in the door,
having tackled the fatal flaw . . .
that dream of the perfect earth floor!*

that it is really an earth floor . . . perhaps one day, we will be brave enough to live in direct contact with our earth floor. Meantime, it is lovely to know it is not suffering.

Before we completed this earth floor in the kitchen, we had made another one in the living room, which was a struggle and not very satisfactory. After futile attempts to seal it, I had been tempted to write an article titled: One Thousand and One Ways Not to Make an Earth Floor. Now, I am writing a slightly more confident version of the article, titled: One Way to Make an Earth Floor.

It is a good idea to find out what ratio of clay to sand your soil has. We simply placed a quantity of soil in a jar, and filled it with water. When the clay particles settle out, you can tell what percentage of clay is present — in our case it was a mere 12 percent. This indicated that cement should be used to stabilise the soil.

A major part of the work was carried out weeks before the floor was laid — collecting trailer loads of suitable earth, homogeneous and as free of rocks and grass as possible. Topsoil is generally not suitable as it is too high in humus content. We sieved these loads of soil through a bed frame from the tip. Various tools were tried, to hasten the soil through the mesh and rake off the pebbles and roots, such as fire rakes and all shapes of shovel. The children enjoyed this operation as it is bouncy and rhythmic.

We barrowed in fine sandy soil for a two inch layer beneath the waterproof membrane (black plastic to us), raked and stamped on it, then placed the black plastic carefully, taping the edges and allowing it to fold up along the footings. After that, we unloaded another two inch layer of fine sandy soil, and tamped this well. Walking on it works when you are tired of banging with 3 x 2's. The sand was moist but not wet.

This left a bit over three inches for the compressed floor.

For this, we mixed ten shovels of sieved earth to one of cement into a trailer till we had about five barrow loads' worth. This was sprayed carefully with water, while being turned from one side of the trailer to the other. Having two people is very helpful here, as the mix should be just moist, not sloppy like a normal cement mix.

We laid the floor in four sections across a room 7.3 x 3.4 m (24 x 11 ft) in area. A board was placed across the edge of each section level with the desired surface of the floor. This made it possible for two people to do the day's work, instead of having many different people and many different styles. Years ago, I was offered help from many generous people at an owner-builders' conference. Thank you all but it seemed too long ago to call on you! After each barrow was tipped out, the soil was spread and tamped. When it came a bit higher than desired floor level, it was screeded with a 3 x 2. Then it was sprinkled with a watering can, and trowelled smooth with a metal trowel — the rectangular one was best. This process was slow, but shows results for care taken to smooth out wrinkles. The joins of the sections were tamped and trowelled especially carefully. It remains to be seen whether or not these joins will be weak spots in the floor.

As the soil was not very wet, the drying period was only a week. This was early spring, or was it late winter? After this time, it seemed dry enough to seal it with Estapol (2 coats). We were keen to move in as soon as possible, so we laid the carpet a few days later. Interestingly, we placed a piece of vinyl under the table for a few days, and discovered that mould was forming under it on the carpet. This means that moisture is still evaporating through the Estapol and the carpet. It relieved us to know that the moisture was escaping. Somehow I like the thought that the floor can breathe. I like the feel of it underfoot — not as hard on the ankles as cement.

The cost of the floor was six bags of cement, yards of

worry, oceanic backaches, and a week or so. In retrospect, that doesn't seem much to pay for a floor that may last a lifetime. Now it's finished, I feel an urge to inspire other earth-lovers to put their feet where their dream is . . . take that dream floor down out of the clouds . . . and walk on it.

Many other ingredients are possible for earth floors, e.g. milk (casein), blood, bitumen, lime, all of which may make cement unnecessary. As we were living in the house, we wanted to avoid anything with a strong smell! The first earth floor we made had bitumen and cement, a la Middleton almost, so it is impossible to say if the bitumen was adequate without the cement. That floor was poured like a normal cement/concrete mix texture, and not compressed. It had no cracking problem, but rubbed off to the touch. It refused to be sealed by any of the commercial sealants on the market. In the end, we poured a thin layer of clay/bitumen on to it, and trowelled till our wrists howled. Before pouring the clay layer, we brushed a diluted bondcrete and water onto the existing floor. This turned out to be essential, because in one place where we forgot it, the clay did not adhere well. This clay layer looked exquisite, after trowelling, but still kept cracking no matter how fast we trowelled and re-trowelled. We couldn't seem to stop it drying too fast. Possibly, if it had been winter, this method may have worked better. However, this floor is only cosmetically doctored, and is not successful because it is only skin-deep.

Comparatively speaking, we feel our more recent earth floor effort was successful. The key to all this is: be guided by your soil, experiment with a shed or verandah first, and don't go by any hard and fast recipe. It is, of course, always possible to use your earth floor as a base for floor coverings if you feel it won't withstand dragging chairs or dropping piggybanks. But your piggybank had better be full if you want to use vinyl or cork tiles! Here's to your free and durable earth floor!

Manure Mania

by Adriana Fraser, Emerald, Vic.

The realisation that I had a greater than 'normal' passion for muck was brought home to me a few months ago by my husband, with the comment 'You LOVE s--t don't you?' I was once again looking around for a supply of the precious stuff. Chook .poo is delivered in copious amounts by our own chooks. We have six on a deep litter system, and during the last twelve months they have supplied me with twenty-four barrow loads of splendid compost for my small vegie garden. However, cow and horse manure is not as easy to come by, although I did have a conversation over the fence with a lady rider some months ago. She offered me as much stable manure as I could handle. (I'll have to learn how to drive with a trailer attached!)

I recall a couple of years back, pushing a baby in a pusher with one hand and dragging a bag with the other, through the paddocks of my brother's rather hilly farm — much to the amusement of two small boy 'poo spotters' running ahead.

Last season I picked up some lovely dry cow manure at my sister's place (also an ardent s--t lover), some 300 km away. I had taken the children there for a holiday whilst my

husband was overseas on a business trip. Upon arrival I spied a magnificent heap of dry cow dung. I jealously eyed it off and my sister, recognising the glint in my eye, offered me as much as I could carry in the boot of my little Meteor. On the return trip all our belongings were crammed into the car. The boot took 4 x 50 kg bags! I made the trip home in much haste and couldn't wait to gloat over my newfound treasure, cow being my favourite of all manures!

My most memorable moments in manure collecting were when we lived on a small property out in the country. We had an enormous vegie garden plus chooks, ducks, pigs and a beautiful house cow and calf. Many a happy hour was passed with my small son (his dad hasn't the same passion), collecting copious quantities of green gold off the fields and transporting it to the lush vegie garden. My son would triumphantly yell 'Here comes another sloppy one!' as I flung it into the wheel barrow.

I am looking forward to this year's hunt, although I have still to find a source. I wonder where it will take me?

Flea Allergy in the Dog

by Bert Luchjenbroers, Atherton, Qld.

Our canine population suffers from degenerative diseases similar to those of humans in our society. This is due to the dog being an extension of the family and subject to the processed food diet. Flea allergy is one example of a common skin problem. The dietary corrective treatment for flea allergy is the same as for other skin and degenerative diseases in the dog. Flea allergy is an allergic skin reaction to the flea bite. There is usually loss of hair which becomes progressively worse the longer the problem has been unresolved. The allergy is usually worse during the summer time which corresponds to increased flea activity.

In order to understand the disease process we need to discuss natural enzymes that are contained in raw food. These natural enzymes pre-digest food when it is eaten. The heat treatment of food is usually done to preserve it, which is partly accomplished by destroying these natural enzymes. Canned food, dry biscuits and cooked food are all heat treated foods so when an animal eats these, it must undertake pre-digestion in addition to normal digestion.

When too much energy is utilised digesting heat treated food, there is a shortfall in available energy to eliminate waste products from the body. This will eventually lead to a high level of waste products in the blood stream, or toxæmia. Because the skin is an organ of elimination, a high level of waste matter will be present here. This is the underlying cause of the allergic reaction of the skin to the flea bite, hence it can

be seen that flea allergy may only develop when first you have an unhealthy skin. The treatment is a raw food diet which needs to include plant food in order to be balanced nutritionally. When studying carnivores in their natural environment, it can be seen that they have plant food as part of their diet. The following table suggests guidelines for a balanced diet which ideally would consist of 100 percent raw foods.

% Daily Intake	Class of Food
40	meat, fish, offal, etc.
40	vegetables — good variety, not potato
20	fruit according to animal's preference

If grain is included in the diet, it should not be more than 10 percent of the daily intake e.g. barley, brown rice, rolled oats, alfalfa sprouts (not wheat or corn). Small amounts of raw goats or cows milk, egg yolks and even herbs can be included in the diet. When considering suitable foods the guidelines are that they should be fresh, raw wholefoods.

A balanced raw wholefood diet works, so the explanation of how and why it works is mainly for academic interest. If you plan to change your dog's diet, it is suggested you phase in the raw diet over a period of at least 6 weeks. It takes approximately 12 months for the full improvements in health and vitality to be seen in your animal. Good health to you and your canine friend.

Another Flea Story

by Suzy Whymark, Eden, NSW.



To keep your animals healthy and itch-free the attack must be a two-pronged one: internal and external. Animal Lover of WA (Feedback, GR 60) was on the right track when s/he suggested garlic in the diet, but I have found this is only one important part of my 'anti-flea campaign'.

INTERNAL

The first consideration must always be diet.

- If you are feeding canned food — STOP! Begin today, replacing (gradually if your pets are fussy eaters) 'junk' food with fresh, raw food. Raw meat, grated carrot and zucchini, chopped parsley, wheat germ, yoghurt, rolled cereals (oats, barley, rye, etc), eggs — all are good natural foods that can be included in your pets' diet.

- Add garlic (fresh — gradually — or capsules) to your animals' daily diet.

- Buy a copy of Juliette de Bairacli-Levy's *Complete Herbal Handbook for the Dog and Cat* (recently revised, hence the new title). This book (RRP \$14.95 + \$2.60 p & p) along with many Natural Rearing products, is available from: Natural Rearing Foods, 43 Georges River Crescent, Oyster Bay 2428. If you follow the internal cleansing program in the book and then the NR diet for your pets, their overall health will improve and fleas will be deterred.

- I (not Natural Rearing) would also recommend the



Magpie, an alert and healthy working dog.

inclusion of brewers yeast in pet diets. Some animals (dogs in particular) are prone to allergic reactions. B vitamins help prevent allergic reactions and brewers yeast is an excellent source of B complex vitamins. So if your dog still has a few fleas, a bite or two won't produce that awful, uncomfortable allergic rash.

Remember: you probably won't be able to change your

pets' diets overnight — particularly not cats — so introduce new foods singly, in small quantities. Some will be accepted readily, some may take time or never be accepted.

Occasionally I have difficulty obtaining fresh meat for my pets. When this happens, I make their tea out of fresh fish fillets (we live on the coast) and boiled brown rice with supplements added; or maybe rice and cooked egg and vegies. If you must, in an emergency, resort to processed pet food, dry food is preferable to canned.

At the end of each dinner meal give your dogs something to chew on — raw bones (as long as they're not little, splintery ones) or some wholewheat dog biscuits.

Wholemeal Dog Biscuits

- 2 cups w'meal plain flour
- ½ cup (that's right!) wheat germ
- ½ cup cracked wheat
- 1 tbsp brewers yeast (for flavouring)
- 1 tbsp vegetable oil
- 1 cup warm water

Mix all ingredients and knead, roll out and cut with a biscuit cutter or knife. Place on a greased baking tray and bake at 180°C (350°F) for 30-40 minutes. Leave in oven to cool. Grated cheese, desiccated liver or fish meal may be added to the mixture for extra flavouring as the plain biscuits are fairly bland.

EXTERNAL

Your dog/cat, its sleeping quarters, and bedding must all be kept clean and flea-free. If your dog kennel or house and yard have already been badly infested with fleas, it may be necessary to take the very drastic step of having a few days holiday, and getting your place sprayed with chemical flea killers before you start your anti-flea program. I don't know, I wouldn't like to have to resort to that myself, but in some cases it may be necessary. Anyway — back to the pets.

- Wash your pet with a good herbal pet shampoo. Two brands that I know of are Nature's Gate and Petsafe — both are available in many healthfood shops and from some vets. A third brand, Green Ban, used to be available (along with a very good herbal flea powder of the same name), but I have been unable to buy it for some time. A letter to them remains unanswered — so perhaps the company no longer exists. Does anyone know what became of them?

- Wash your pet's bedclothes and put a few drops of oil of pennyroyal in the final rinse water.

- Spray the area where they sleep with a mixture of oil of pennyroyal and warm water. One of those trigger-pack sprays is good for this. Then sprinkle a few drops of the oil around.

- (optional) Purchase a Petsafe herbal flea collar from your vet or healthfood shop. If unavailable from either of these sources, write to California Dream, PO Box 634, Bondi Junction 2022. Allow about 4 weeks for delivery.

- In between washes, brush your dog regularly and rub over with a damp cloth on which you have sprinkled a few drops of oil of pennyroyal, and perhaps also you could add a few drops of eucalyptus and pine oils (both insect deterrents).

By the way — if your dog (I don't know about cats) already has a skin problem, tea tree oil is very good for treating these. If the rash has produced open sores, you may



Suzy with her Dalmatian Phoebe.

find the oil too strong to use neat, in which case dilute with a little warm water. You may also make your own flea rinse by infusing leaves of pennyroyal if you have it growing.

By following these simple steps, you can ensure a happy, flea-free life for your canine and feline friends. They'll certainly appreciate your efforts on their behalf.

Further References

Homoeopathic Medicine for Dogs, H G Wolff, Thorsons, UK 1984 (distributed by Lothian).

Dr Pitcairn's Complete Guide to Natural Health for Dogs & Cats, R H & S H Pitcairn, Rodale, USA 1982 (distributed by Collins).

Dog Fleas, GR 46, pp 23-5.

**ORGANIC
SUBSCRIPTION FARM**
222 Wattamolla Rd Berry 2535
ph. 044 651261

NO artificial fertilizers

NO dangerous pesticides

**For \$300 per year plus 5 hours work
per month, we will supply virtually all
your family's vegetables, herbs and
berries for one year.**

present members receive approx 15 kg per week.

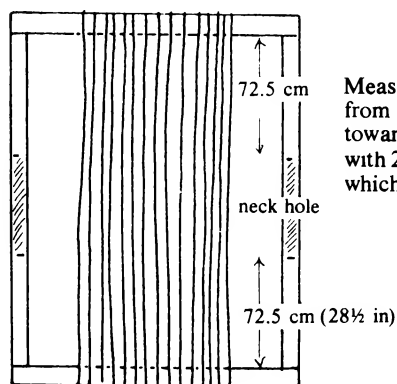
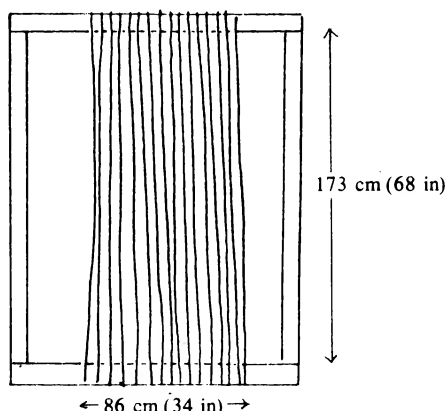
An Easy Handwoven Poncho

by Caroline Tully, Guildford, Vic.

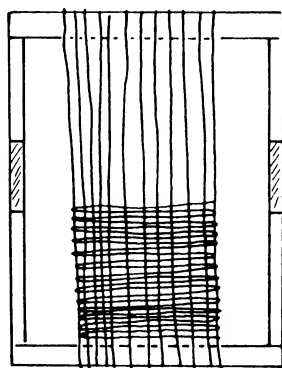
This poncho is so easy that I, who have only ever woven two other things in my life, am making one. A friend of mine brought a poncho back from Mexico and when we were up at the snow once, he lent it to me. I liked it so much that, since he would not part with it, I decided to make my own. It can be done on any loom that it will fit — even a complicated loom with pedals etc. The beauty of it is that it is basically only a rectangle and therefore can be made on the most hodge-podge loom as long as it's big enough. I am presently doing my poncho on a bed-frame loom which is the perfect size.

To start with, the measurements are 86 x 173 cm (34 x 68 in) and the slit to put one's head through is 28 cm (11 in) long.

Warp up your loom like this:



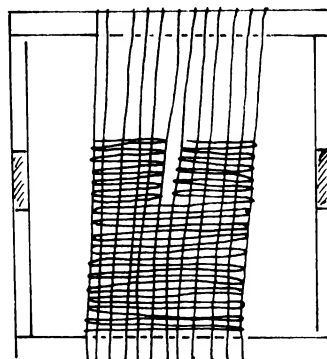
Measure 72.5 cm (28½ in) from the top and bottom towards the middle. This leaves you with 28 cm (11 in) in the middle which will be the neckhole.



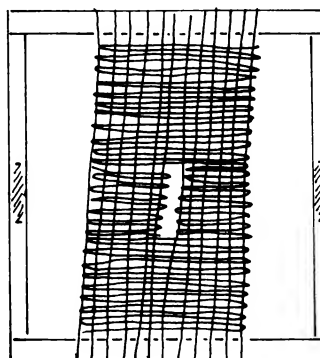
Start to weave across and back until you reach the space marked for the neck hole.



My poncho has been woven in a range of earthy colours — ochre, burnt sienna, olive green and a soft biscuit brown — that can easily be created by dyeing with natural materials. Don't forget when weaving to beat the weft down strongly for a close, firm fabric.



For the next 28 cm (11 in), only weave to the centre and back on each side so that it makes a split.



Then begin to weave right across and back again to close the split.

When you've finished, cut it off the loom, tie knots on the warp threads that come out either end of your poncho and put it over your head. This pattern can also be enlarged or reduced to fit different sized people.

BUYER'S GUIDE

Selecting the Healthiest Foods

Part I

You may be interested to know that many health food store proprietors are disappointed and frustrated with buyers' inability to recognise nutritionally superior foods. Often staff go to great trouble and expense to locate the most wholesome lines available, only to find that they remain unnoticed on the shelf. Subsequently that particular item disappears altogether.

As a general rule, the less processed and more natural of the packaged foods are found in health food stores. However, whether in a health food shop or supermarket, how can we know just what we are getting? Can we be sure of nutritional quality? The answer is that we cannot be absolutely certain, but we can in most cases sort the wholesome food from the foodless food, and identify the best lines from the rest.

This guide lays out the steps in assessing wholesomeness in packaged foods. We suggest you take it shopping with you in case you need to use it for reference, at least until quality discrimination becomes second nature for you.

SEVEN STEPS IN QUALITY ASSESSMENT

We recognise seven basic steps in assessing nutritional quality of packaged foods.

They are as follows:

- Consider freshness.
- Read the label looking for nutritional information.
- Consider the major ingredients.
- Be alert for added salt, sugar or fat (or oil).
- Consider if cooked whether necessary, and how cooked.
- Look for any special treatment processes.
- Watch for food additives.

Consider Freshness

Look for the 'Use by ' date on the packet. This is very important as staleness in packaged foods usually cannot be determined by inspection.

Wheat Germ Be cautious as wheatgerm goes rancid quickly. The fresher it is the more yellow the colour. Coarse flakes will keep better than fine flakes.

Linseed Meal goes rancid extremely quickly. Ideally, it should have been ground the same day.

Read the Label

The label should meaningfully name the food inside and give the all-important list of ingredients. Under health regulations (NSW) every package of food shall bear a label on which must be shown the common name of the food indicating its true nature. Only foods which are measured and wrapped in your presence need not bear a label.

An ingredient list is compulsory except where there is only one ingredient or for alcohol or unprocessed cheese. Ingredients must be listed in descending order of quantity, that is, the major ingredient must be listed first and that in the smallest quantity last. If a food that you are interested in does not have a label, seek the advice of the shop staff.

The Major Ingredients

Select food for the best kind of major ingredients. The name of the product and the ingredients list should make clear what these are.

Cheese Choose cottage, ricotta or unprocessed cheddar, rather than processed cheese. Apart from salt and rennin, little else will have been added.

Eggs We recommend that you search for free-range eggs. Remember that eggs labelled 'farm fresh' are usually from hens in cages.

Canned Meat Substitutes — usually based on peanuts or soya beans, which are superior to meat as a source of protein. It would be preferable to avoid those with added wheat flour or gluten flour.

Bread and Flour Products Always seek wholemeal bread, wholemeal flour or other wholemeal products in preference to refined white flour products. The ingredient 'flour' refers to wheat flour. 'Wholemeal', or 'wholewheat', and 'wheatmeal' mean the same thing. Flour and wholemeal flour may contain a number of additives.

'Wholemeal bread' must be made from flour which is at least 90 percent wholemeal. From a health point of view we suggest this is good enough. 'Brown bread' must be made from flour which is at least 50 percent wholemeal. This is very much a compromise on nutritional quality. 'Rye bread' must be at least 30 percent rye flour, and the rest wheaten flour. This allows too much white flour. Bread made entirely from rye flour (unrefined) would be preferable.

Corn flour is a misleading term as it is the starch powder obtained from any variety of cereal grain. Only 'pure maize cornflour' is made from corn. Gluten flour is obtained by the removal of a large proportion of the starch from white flour. Flour may be artificially bleached by ozone, oxides of nitrogen, chlorine or benzoyl peroxide.

Kibbled breads do not have any special value and are usually based on white flour.

Millet or buckwheat products are nutritionally superior to wheat products. The nutritionally ideal breads are those made from sprouted grains, but you may have to search long and hard to find these in shops.

Muesli Avoid too much mixture in the ingredients such as added protein powder. Look for as high a fruit content as possible.

Bran Choose unprocessed rather than processed bran.

Foods for the Sweet Tooth Where sweet foods are desired, try to use foods based on dried fruit, or else honey, rather than white sugar or raw sugar.

Maple Syrup Look for genuine pure rather than imitation syrup.

Vegetable Oils If practicable choose these rather than animal fats because they are less saturated. Choose only oils with 'cold pressed' written on the label. Give preference to those brands in a coloured bottle or can to exclude light.

Alternative Coffees In the 'instant' form, these are made by roasting and grinding the major ingredients, which are usually

A STAIRWAY TO PARADISE

by John Elliott, Box Hill North, Vic.

I think I remember a song of this title, but to some of us the stairway to our paradise is more likely to be a pain than a joy. Stairs command their own vocabulary, lovely words founded in tradition like: strings, nosing, balustrade, newel, riser and tread (see figure 1) — musical to the ears but not always so attractive if you have to wrestle with the problem of creating the reality.

I needed a stair to the front verandah of my paradise. Having looked around at various sets of stairs and knowing my carpentry skills were not on a par with those of the masters, I sought an easier solution. Seeing a new steel staircase with the tread supports welded to the strings set the grey cells working, and a later meeting with a small piece of angle iron caused the plan to fall into place. My idea was to produce a simple yet sturdy staircase by bolting the treads to the strings, using angle iron brackets.

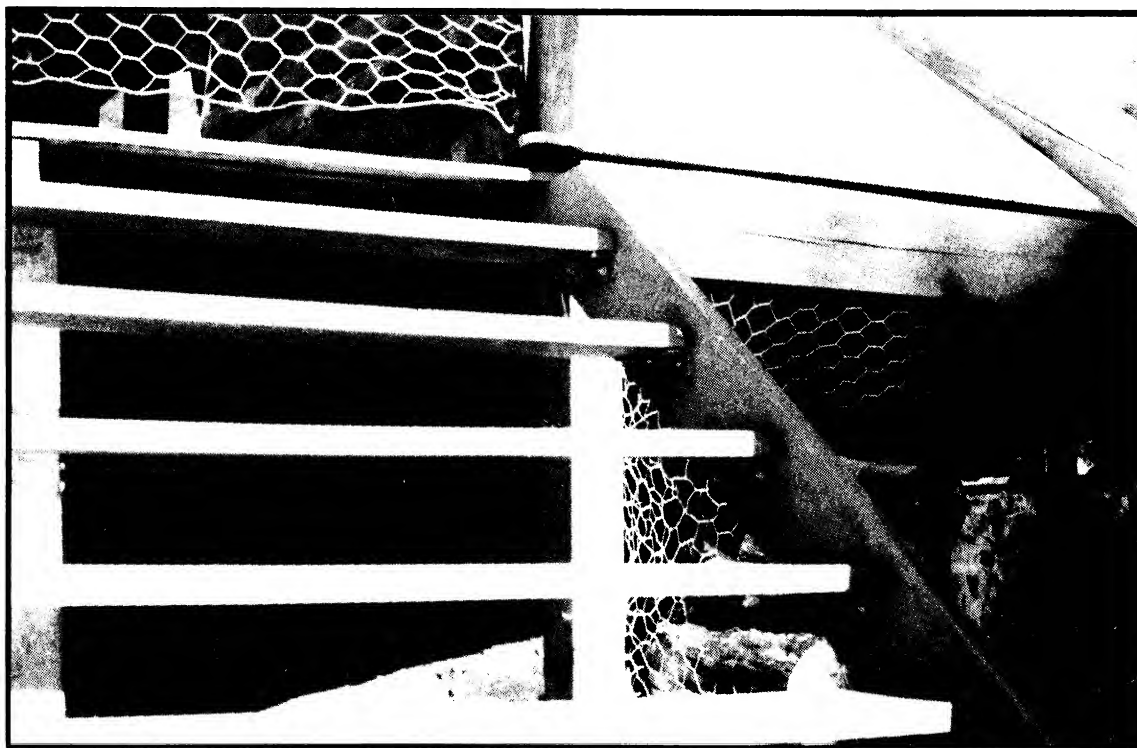
For a staircase height of 1.5 m (5 ft), I chose 200 mm (8 in) as the distance between treads, but this is up to you. Your decision will be influenced by the height of the intended staircase, and how steeply you want it to rise. Consider the age and health of possible users. My choice of timber was easy. I had some left over from the initial building. You obviously need timber that can withstand the weight of 2 people at its centre where it is unsupported. Go for overkill. I underestimated and have slightly springy stairs as a result. The wider the steps, the stronger the timber needs to be. The amount of timber required will obviously depend on the size of the staircase, so allow enough for two strings angled to the required height, and work out the quantity you need for the

steps by multiplying the width of the staircase by the number of treads.

Take care to ensure the newels are equidistant from the building, or your steps will end up out of skew. Construction is simple from then on and can be done with hand tools. You need two pieces of angle iron and six coach bolts (each 6 x 60 mm/¼ x 2½ in) per step. The angle iron I used was 50 x 50 x 150 mm (2 x 2 x 6 in), with two holes drilled in one flat to attach to the string, and one hole in the other flat to attach to the tread (see figure 2). These holes do not have to be accurately placed. If you are lucky enough to have electricity, a power drill makes light work of this job.

Assembly is simple once the strings are placed. The more accurate you are at this stage, the more adjustment is available to you when placing the angle iron supports. However I found I had around 100 mm (4 in) latitude on my size stair. Mark off the position of the first angle iron and fix it, ensuring it is level front to back. Place the tread on top and using your spirit level work out the position of the opposite angle iron support and fix it. Proceed until the supports for all the steps have been fixed, then tighten up the support bolts. Mark the location of the holes in the treads, drill and fix to the supports (see photo). The completed dimensions of my staircase are:

- width 1.8 m (6 ft)
- height 1.5 m (5 ft)
- stair depth 200 mm (8 in)
- stair width 1800 mm (72 in)
- stair rise 200 mm (8 in)



From this angle you can clearly see the iron brackets bolting treads to risers.

The advantages of building this way are that you can apply preservative to all edges of your timber before assembly and the stair treads can easily be removed for later retreatment. It may not be Jacob's ladder, but it's a practical means of access to your earthly paradise.

Fig. 1. Parts of a staircase.

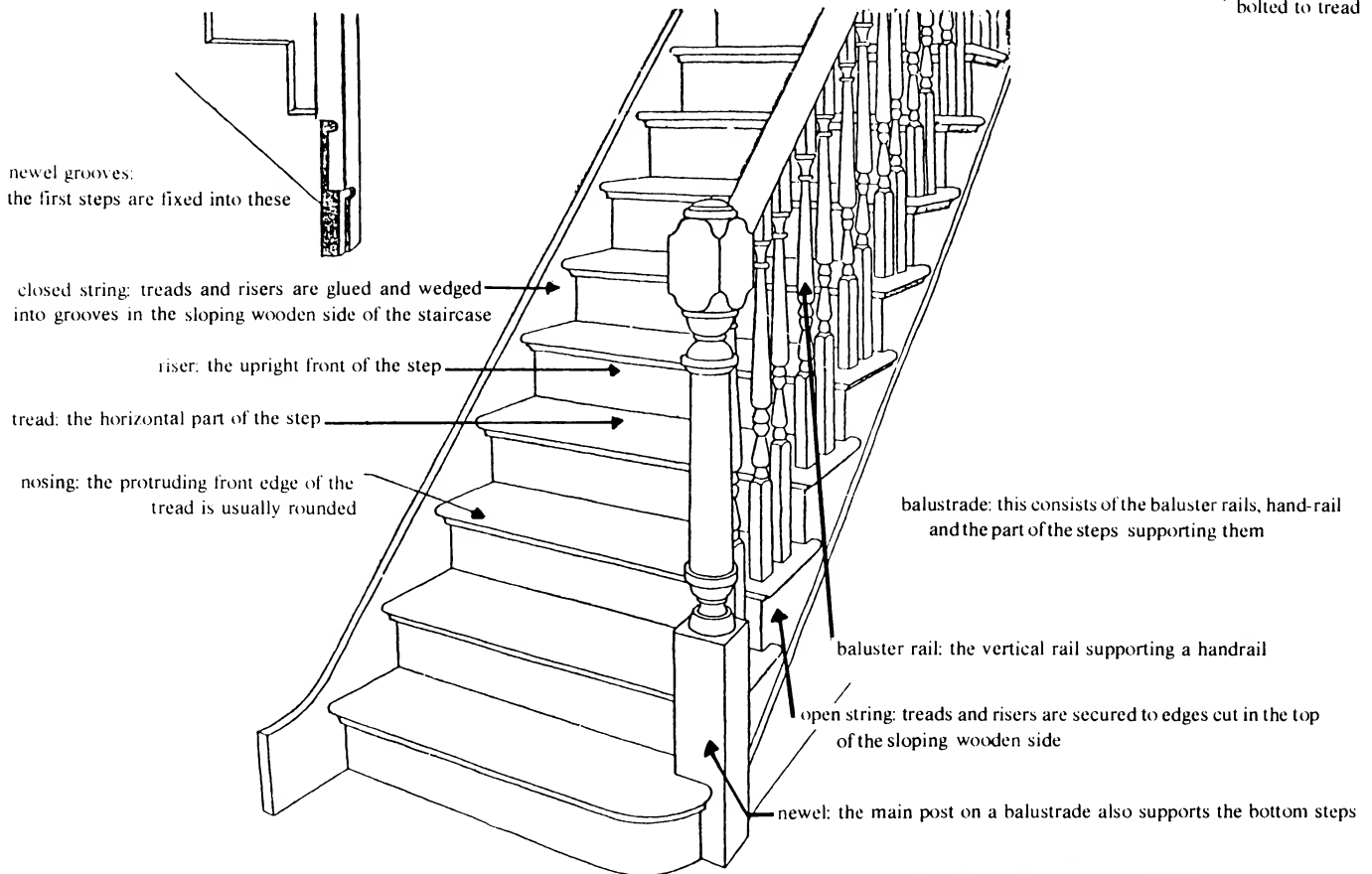
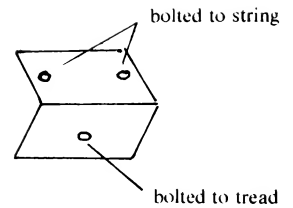


Fig. 2. Angle iron bracket.

50 x 50 mm (2 x 2 in) angle iron
150 mm (6 in) long

14 needed for 7 steps
drilled 1 hole 1st flat
drilled 2 holes 2nd flat



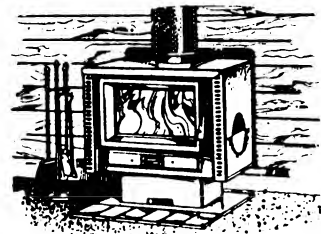
Safety and Wood Heaters

An average of two fires a week in the Melbourne metropolitan area are caused by badly installed wood heaters. This alarming statistic has prompted the Victorian Solar Energy Council to urge people contemplating installing wood heaters to thoroughly check all installation points.

According to the Council, today's wood heaters are a highly efficient way to heat water in the home. In cases where wood is already being used on a regular basis for home heating or cooking, wood makes good sense for water heating. However, it is imperative that wood heating equipment be installed correctly to obtain the maximum benefits and of course reduce any fire risks.

At a recent wood industry trade day, a spokesperson for the Melbourne Metropolitan Fire Brigade said there were two main causes of house fires resulting from wood heaters. The first is the misuse of wood heating appliances through overloading and lack of correct maintenance such as regular flue cleaning. The second cause is through faulty installation, generally due to 'do-it-yourself' installers.

The Solar Council has several brochures available free to



manufacturers and the public about wood heating. These include:

- Operating hints for wood heaters.
- Installation checklist for wood heaters.
- Water heating using wood.
- Buying a wood heater.
- Types of wood heaters.
- Wood heating glossary.
- Wood fuels.
- Heating costs.

The Council is committed to shifting Victoria's reliance away from non-renewable energy to solar based renewable energy sources.

Further information and brochures are available from the Solar Council, 10th Floor, 270 Flinders St, Melb. 3000. Ph: 03-654-4533.

AIR IONS AND HUMAN HEALTH

by Dr.Allan J. Mortlock, Hughes, ACT.

Most readers will have heard of negative air ion generators, either through articles in the press or television programmes and advertising. When I first heard of them I had mental visions of black boxes around which there was supposed to be a thin cloud of particles which would somehow do you good. The thought was also there that most of this was in the imagination of the manufacturer. A goodly proportion of people react similarly and dismiss the whole idea that these devices might be of some benefit to them.

This first reaction is quite wrong. But, before we go into this in detail, a few words of explanation. What are air ions? In the simplest terms they are electrically charged particles of the air. They are not simple: upper atmosphere studies indicate that there are a number of types. For our purposes here we can think of positively charged particles and negatively charged particles. There are normally slightly more positively charged particles than negatively charged particles.

These ions are produced by the nuclear particles emanating from natural radioactivity in the air and soil and by cosmic rays. The nuclear particles bombard the originally electrically neutral air particles, causing them to become electrically ionised. That is, they gain or lose one or more electrons. At sea level in good clean outdoor air there are approximately 1000 negative air ions per millilitre, though there is considerable variation from place to place. Indoors the average concentration of both ions tends to be lower than outdoors because the production processes are reduced. Once again there is a wide variation from place to place. Also there is a variation with time at the same location throughout the day and from day to day. The maximum ion concentration has been measured when the concentration in airborne radioactivity is at a maximum, as you might expect. The naturally occurring radioactive gas radon is responsible for this airborne radioactivity.

How can these ions, being only a tiny proportion of the air, affect our health? There are two main ways. The first is that the negative air ions tend to combine with positively charged smoke particles. The increase in weight causes these to gravitate to the floor. In other words the air is cleaned. The collection of dust on and near negative ion generators is a clear demonstration of this mechanism operating. In fact, at least one laboratory in Australia uses negative ion generators to clean the air in the work spaces used in laser physics experiments.

The other way is that changing the concentration affects the hormone level in sensitive individuals. A remarkable demonstration of this was an aborted experiment carried out at a large institution, the aim of which was to vary the negative air ion concentration substantially in a large working area without the staff knowing, and looking for changes in requests for sick leave. Unfortunately the ion concentration was made so large that female members of the staff had their menstrual cycles affected.

The hormone involved here is thought to be serotonin (5-HT), an important body neurohormone. An increase in negative ion content of the air is said to decrease the level of

serotonin. This produces a calming and relaxing effect. As yet the details of how this takes place are not known.

Generally speaking, negative air ions are good for you and positive ions are not. The well known witches' winds of the northern hemisphere have increased concentrations of positive air ions and produce a number of health problems such as tension, migraine and sleeplessness.

NEGATIVE AIR ION GENERATORS

Negative air ion generators are used to boost the negative air ion concentration for one or more of the reasons just mentioned. They come in a number of forms. The most common is a mains or battery driven unit which produces negative ions in the region close to a series of sharp needle points which are held at a high negative potential, several thousand volts. The effect of this is to cause electrical breakdown of the air. In the dark a small blue glow may be observed which is essentially the same as the St Elmo's fire seen at the tips of the spars in the days of square rigged sailing ships during electrical storms.

The negative ions produced in this region stream away by electrostatic repulsion and in so doing produce what is called 'the electric wind'. A hiss may be heard if the ear is placed near one of these points. Wetting the back of the hand and placing this close to the needle point allows the wind to be felt. These two simple tests prove the generator is working.

This type of generator comes in many forms: some are for bedside use; others are full industrial units for ceiling mounting, or free standing console units; some are fan assisted; or a fan can be placed behind them.

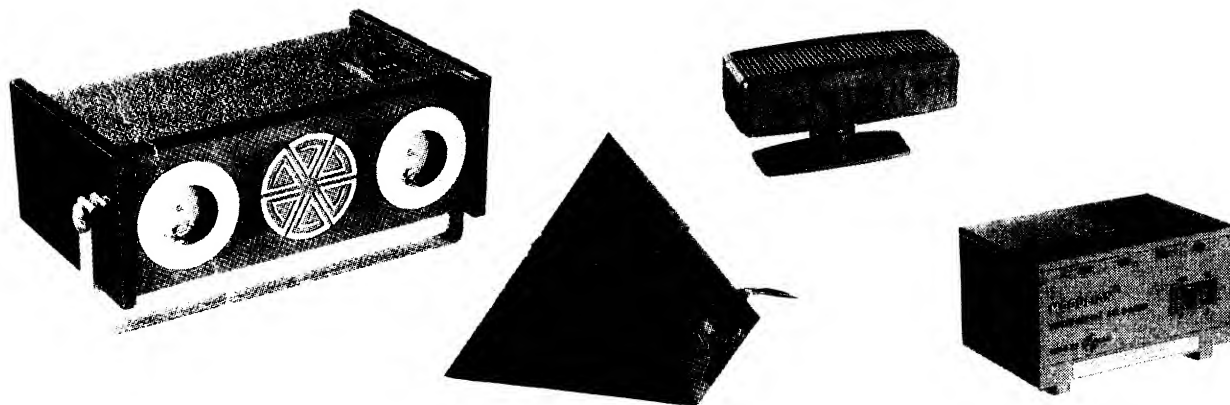
The needle points themselves are usually mounted in small ports along the side of the unit. Although the voltage on the point is high they are not dangerous, as only tiny currents can be passed. It is important to use a mains transformer inside the unit to prevent any possibility of circuit breakdown leading to the mains voltage reaching the points.

The units do produce a very small amount of ozone, O_3 , which in sufficiently high concentration can be harmful to health. All the units I have met have been measured for ozone output and none have been found to be above permitted limits quite close to the needle point.

USES OF NEGATIVE ION GENERATORS

A series of experiments was carried out at the Australian National University in which negative ion generators were employed to see what effect negative air ions have on asthma. These ion generators were positioned at the bedside of the asthmatics concerned and switched on and off in such a way that the patients did not know, to avoid any placebo effect. The ability of these patients to breathe was measured with PEF (peak expirator flow) meters once in the morning and again in the evening.

The research student who carried out these experiments concluded that about half the patients in the study responded favourably to an abnormally high level of negative ions. No patients had a genuine adverse reaction. Females respond



A range of negative ion generators for use in large or small areas. There are battery and mains powered models available.

more quickly, it was found. As far as duration of the effect was concerned there was no significant fall off in PEF rate until one to three months after the generator had been removed. Generally speaking, the conclusion of this study was the same as that obtained at St Bartholomew's Hospital, London.

A parallel set of experiments on mental alertness carried out with secretaries at the ANU showed an improvement in mental alertness in the average work situation. This was measured using reaction times. When the doors of the small offices were closed the improvement in mental alertness was increased three fold, with the negative ion generator located on the desks of the secretaries concerned.

Other health problems which have been reported to be helped by boosting the negative ion concentration are bronchitis, catarrh, coughs and colds, burns and warts. Negative ion generators can obviously help in work situations where air pollution and odours are a problem. They also assist in reducing the possible spread of airborne germs, thus avoiding

the spread of infections by this route. Other problems which have been reported as being helped are hay fever, rhinitis and allergies, sinusitis, stress and migraine. Improvements to relaxation, sleep and performance have also been reported.

It must also be said that working in air conditioned offices is not necessarily good. I found that workers in one new building were not feeling well. An air ion survey showed a low negative air ion concentration, especially when compared to the level of 1300 per millilitre measured outside under the trees the same day! Further investigation revealed that the air was recirculated, with no new air being brought in. The only solution was the installation of small negative ion generators on the desks of those affected.

Because not everybody with a particular health problem will be helped and even those that are helped are helped to varying degrees, it is not possible to say with certainty that these units will be of value in a specific case. Certainly the air will be cleaned. The more powerful models have an influence out to a radius of 11 feet and are excellent for large area use. Everybody in this region must benefit to a degree from this. For a specific health problem the best advice that can be given is to buy one and try it.

I have been disappointed more than once by people such as bad asthmatics, who have to spend short periods in hospital and need perhaps three drugs a day, refusing even to try a negative ion generator. Surely it is better to change the environment rather than the patient! A friend of mine once very rightly said 'it is always worthwhile to take a look'. This is true of negative ion generators as well!

For more information about negative air ion generators contact: Bionic Products Pty Ltd, 104 Ebley Street, Bondi Junction, 2022, (02) 387 6888 or Capital Scientific Instruments, PO Box 202, Curtin 2605, (062) 812 335.



THE QUEENSLAND INSTITUTE OF NATURAL SCIENCE

Accredited by the Australian Traditional Medicine Society
Kindly invites you to send for full particulars of their
CORRESPONDENCE COURSES in Naturopathic
and other subjects, namely:

- HERBAL MEDICINE FOR THE HOME
- PROFESSIONAL HERBAL MEDICINE
- IRIDOLOGY OR IRISDIAGNOSIS
- MODERN DIETETICS AND NUTRITION
- ORGANIC FARMING AND GARDENING
- DIPLOMA IN NATUROPATHY, N.D.
- COLOUR THERAPY • HOMOEOPATHY

To: The Secretary, QINS, 123 Montville Road,
Marleton, Qld, 4560 Or Phone (071) 45 7153

Please send me obligation free details of your
correspondence courses.

NAME
ADDRESS
TOWN State Code

"Why were you born? The purpose
and meaning of your life on earth.
Further information is available in
different languages.
UNIVERSAL LIFE, dept. E,
P.O. Box 5643, D-8700 Wuerzburg,
West-Germany"

Installing a Combustion Cooker

by J.P. Sturm, Franklin, Tas.

We have been renovating our circa 1948 cottage gradually over the last five years. Last winter was the time for really drastic action. It has long been our desire to install a combustion cooker and the plumbing was on its last legs. The acquisition of an eighteen month old Everhot 204 Deluxe for \$1100 made our minds up about which to buy. I was very tempted by the Bosky but the price is astronomical.

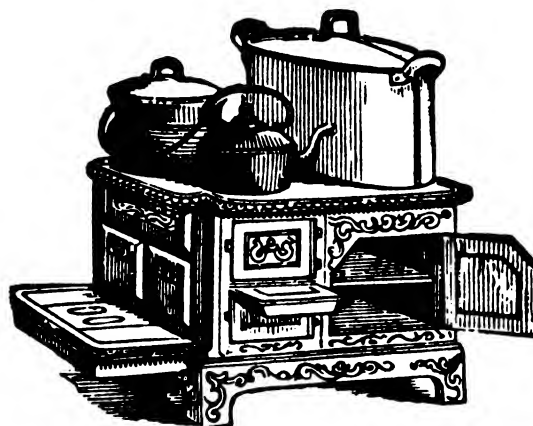
I strongly recommend anyone contemplating extensive renovations do as we did first. I found a local owner/builder, with lots of useful experience and tools, to come and give us a hand with the difficult bits. We made a new friend as well as having a lot of work done for \$12 per hour, a lot less than tradesmen's rates. In the long run, this money spent will be money saved, as there is a lot of scope for making mistakes, which could be costly to make good, in time if not money.

The next step was a visit to the town hall. The building inspector has a duplicated list of building regulations concerning the installation of fuel heaters and stoves, plus photocopies of drawings he has made of various options available to us. Even though we did not need to comply with these regulations, as we were installing the cooker in an existing dwelling, not a new one, safety comes first. There is a definite fire hazard which is a potential threat to your life and/or your life savings. The same is true of electric appliances but there we rely on qualified (expensive) installation.

Since we have timber floors, the next step was to cut a hole for the concrete slab where the stove was to go. We could have used asbestos cement sheet but as the floor moves when we walk across it (75 mm x 50 mm/3 x 2 in floor joists!!) and the ground was only 150 mm (6 in) below the floor, the slab option was chosen. Had we used a tungsten carbide tipped saw blade, we would not have had to finish the hole with hand saws. Despite careful measurement, taking account of where the nails were and where the flue was to go to miss ceiling joists and rafters, we found a nail. While Peter was framing the slab, I carted in plenty of rubble to extend the concrete. *Handy Farm and Home Devices and How to Make Them* (Cornstalk Press) has lots of information on concrete, so I won't go into details here. The only change in modern times is to add a squirt of dishwashing detergent to the 'mud' to improve its workability. Reinforcement was chicken wire 1 cm (½ in) below the surface.

A few days later, after the slab had set, Peter arrived to put up the brick wall, which was to be the heat shield between the combustible wall and the stove. Metal heat shields are allowed but lack the heat sink property and aesthetic appearance of bricks. The bricks were dry clay bricks as cement bricks do not set up the mortar as quickly as clay. Our 2.7 metre (9 ft) high wall was done in two stages whereas with cement or wet clay bricks it may have taken five or more! The brick wall was well tied to the timber wall, with the required 25 mm (1 in) gap between them.

While the mortar was drying we took out the old hot water cylinder and removed its outer case and cork flake insulation, which went for mulch around some trees. We took the



cylinder to the local garage and silver soldered two short lengths of threaded brass pipe for the connections to the stove. I built a small wooden stand to bring the hot water outlet just below the minimum level of water in the tanks outside. This level was carried to the house by tying a 600 mm (2 ft) builder's level to a straight stick and brought inside by careful measurement. The thermo-syphoning effect will only work if the hot water from the stove rises into the tank. In theory this pipe should be 13 mm (½ in) and the cold water pipe 19 mm (¾ in) but we used 19 mm for both and it works.

We had bought the flue kit for the Everhot, and as the instructions with it are skimpy to say the least, Peter's previous experience was essential here. The slab had been centred by suspending a plumb-bob from the point on the ceiling that went precisely between two rafters. When the stove was rolled on to the slab (using short lengths of 50 mm steel pipe), it was centred by suspending the plumb-bob from the same point. The hole in the ceiling was cut with a jig-saw, well oversize. The flue kit contains a decorative plate that hides the gap between flue and ceiling. The plumb-bob suspended over the centre of the flue gave us the centre of the hole to cut in the roof. A hole bored through at this point under the roof gave the centre of the hole we cut then, from on the roof. This is an oval with its long axis running with the slope. This was cut by drilling a series of holes along the line of cut, finished by chiselling (with a cold chisel).

The flue was carefully assembled as per the instructions which came with the kit. The unpainted insulated portion was lowered through the hole in the roof, to mate with the painted insulated portion which had been pushed through the decorative plate installed on the ceiling. I used temporary pads of masking tape to prevent the paint being scratched. All joints are put together with stove cement ('bog') to make them airtight. Despite the expense, I used a rubber 'Aquaseal' to seal the joint between roof and flue as it is very simple and quick. I pop riveted it onto the roof using silicone sealer to waterproof the joint. Self tapping screws could be used, but pop rivets are better.

Using a hammer drill and masonry bit, two holes were drilled in the brick wall to convey the water from the stove's water jacket to the hot water cylinder. These were carefully measured so that these pipes come into the compression

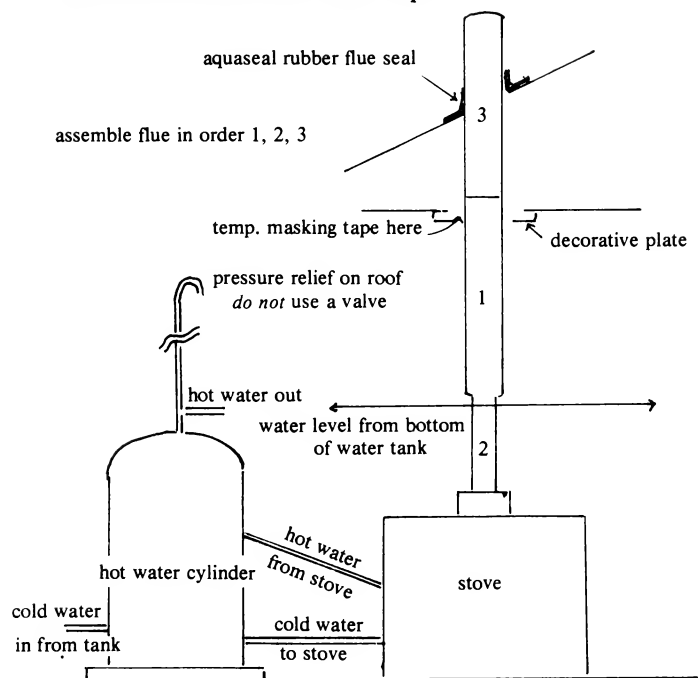
fittings on the stove, precisely. Foam rubber pipe insulation was slipped over these pipes between the stove and wall to improve efficiency and reduce the chances of burns. These pipes run *hot*.

I built a box around the hot water cylinder and we installed the pipes between it and the stove. The compression fittings on the stove and hot water cylinder were the only ones we used. A friend spent more on compression fittings than we spent on our whole plumbing system! Wherever possible we used sweat soldered connections. Despite the use of plumbing tape the cold water inlet dripped, but so slowly it was left with a mug under it for the week it took to stop dripping. It is a mistake to overtighten these fittings to the point where they are damaged. I stuffed the box with fibreglass insulation which was a mistake. Over the ensuing weeks, I took more and more out. The water in the cylinder stopped boiling when I took the second last batt out.

We did the plumbing with 19 mm (¾ in) hard copper throughout as it allows double the water flow of 13 mm (½ in). Instructions on sweat soldering are in books on plumbing in your local library. Buy 50 per cent more fittings — T's, elbows and so on — than you think you will need and take left overs back. Shop around, we saved 50 per cent by finding the cheapest plumbing supplier, who also gave us (mostly) excellent advice. He did try to sell us a header tank and pump that we did not need, but he gave us a lot of bargains and suggestions (e.g. grease trap on kitchen sink outlet).

Sewerage was all plastic, some 40 mm (1½ in) some 50 mm (2 in) some 90 mm (3½ in), depending on outlet sizes. Be careful as the T's are not quite right angles. There is no

Installation of Stove and Water Pipes.



problem if you trial fit everything before cementing. Number each joint in a complicated section with a felt tip pen for the correct order of assembly. The sewerage was the easiest part of all the renovations.

After the plumbing was completed the whole system was checked for leaks by filling it with water. It was quickly drained through the outlet installed at the lowest point of the system, for re-soldering the joints that dripped. In theory, if you take sufficient care none of them should, but in practice, Murphy's Law says that the most awkwardly placed ones will. Once we were sure the system was watertight and full of water, we fired up the stove. Because of the quantity of insulation in the stove it takes about 24 hours to warm itself up and commence heating the water. By the same token it takes a long time to cool again, so firing up for a few minutes a day in hot weather will heat the water sufficiently. The insulating covers on top of the stove keep the heat in but I did install a ceiling fan as well for the hot days.

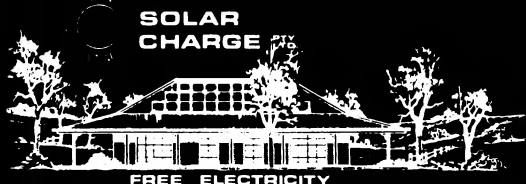
It takes about two weeks to learn how to cook again on the fuel stove and requires a lot more small wood (to provide quick heat) than your normal fire. Once mastered though, it is almost as easy to use as electricity. Whilst our wood consumption has increased marginally, our electricity bill has been halved. As we have to pay a fixed charge that is 40 per cent of our recent bills, it would probably be a more dramatic reduction in other states!!

The stove cost \$1100, bricks, flue, labour and fittings about \$900. Consequently, the stove will have paid for itself in ten years, unless the cost of electricity continues its rapid rate of increase. We saved about \$1000 on the cost of installation by a professional and had a learning experience.

HANDY HINT

To prolong the life of lemons store in a plastic bag in the fridge.

SOLAR ELECTRICITY



- 12 volt solar panels - 5 year guarantee.
- Inverters 12 volt - 110 volt DC. Input to 240 volts AC.
- Large range low voltage lights.
- Gas/Electric fridges - 8 cu.ft. 10 cu.ft.
- 12 volt fridges.
- Pumps, circulators, pressure 12 volt.
- Deep cycle low maintenance, long life batteries.
- Battery chargers, regulators, mounting frames.
- 9 year's experience in Solar Electrics.
- Open 9 - 5 weekdays, Saturdays 9 - 12.

Call or write to:

SOLAR CHARGE P/L
Shop 122 A Martin Street
Gardenvale 3185 Tel: (03) 596 1974

Experts in Solar power for remote houses

PUREBRED POULTRY BREEDING

Part II

by Owen Frost, Canterbury, NZ.

Last issue Owen introduced us to purebred breeding with a rundown on his initial, rather unsatisfactory management program. After being caught up in the conventional feeding/medication treadmill for a number of years he developed his own alternatives, including a wet mash, which he has found keeps his breeders healthy and fertile.

Eggs naturally must be fertile before they will hatch — this is made positively so by the two rooster method. By candling eggs at six days incubation, with the use of a strong light under the trays, the infertile eggs can be removed. After a hatch, if all the unhatched eggs are opened it can easily be seen at what stage the embryo died. Eggs showing black lines or black yoke have died within the first few days. This is caused by:

- Not settling the eggs and holding at least twelve hours in a turning tray on their sides prior to placing in the incubator.
- Eggs left too long under hens in hot weather, where incubation may have started and then been stopped by late collection and cooling.
- Too much sunlight on the eggs.

Half-formed embryos with very prominent yoke-sac have died during the second week, caused by:

- Rough handling in the incubator.
- Poor air control.
- A weakness in the breeders (food related).

Providing there are not too many, a few deaths from these causes can be accepted as a natural death rate.

Chicks should hatch clean and fluffy; spraddle legs are generally caused by deficiencies. However make sure chicks hatch onto gauze or a rough surface, otherwise this may be the reason. Air and humidity control throughout incubation is very important. Moisture prevents the eggs drying out, the air is necessary in varying quantities as the embryo grows. Where the eggs are hatched in the same incubator as they were set in, this control is even more important, especially when subsequent hatches are being performed. On the eighteenth day it is necessary to air blast the eggs in order to drop the air-cell, which requires at least twelve hours. The next stage is to transfer the eggs into the hatching trays in the bottom of the incubator. This is the critical time to close the air vents enough to hold the additional humidity required to soften the shells and allow the chicks to peck (pipping). If the shells are too dry the chicks just cannot pip through; they also become stuck to the membrane. With too much humidity the chicks drown in the shell. By subsequent hatching every three days, the eggs were always fresh; the humidity was held for three days and then vents opened straight away to blast the next hatch coming up. Hatching frequently also meant there wasn't so much difference in size of chicks when orders were made up later. Regular turning of eggs is also important.

I used a round single element electric brooder swung over a pen, with a flat wooden floor covered with newspaper, for the first three days of brooding. This coincided with the hatching, but also allowed the wee chicks time to strengthen their feet and legs before going onto the wire mesh in the tier

brooders. My choice of tier brooders was simply for space, and ease of feeding and cleaning. Temperature is important to watch. If too cool, overcrowding occurs and they smother. If too hot they do not feather tightly and even the feathers turn back. If the light is wrong feather picking can be a problem. This can also be caused by insufficient salt in their diet. Commercial chick pecks certainly make chicks grow, but very often they are not feathered enough for sale at six weeks. A ration similar to that for layers, added to the pecks, develops a smaller, hardier chick, the greens being necessary to stop coccidiosis at this stage. Commercial pecks usually have a coccidiostat in them. Keeping the pens clean and dry is a must. Chicks fed in this way do not pick up and spread coccidiosis (a microscopic intestinal worm) in the same way as if fed entirely on commercial feeds. This natural healthy food helps develop immunity at an early age. Poultry advisors do not accept this fact and look for symptoms of other diseases when presented with a sick bird of this nature. This is because under normal commercial conditions the whole pen would have it and be down in twenty four hours. Once again good healthy food plays an extremely important part, combined with a lower stocking rate and a dry litter. Damp conditions harbour disease.

My preference is to rear these old purebreds at a slower rate by feeding less protein. They may take twenty four weeks or more before coming into lay, but their egg size is generally better and they are less inclined to neck moult, a check moult caused by stress or fright. Grown out in this way, they are capable of at least four good productive years. This means only one quarter of the flock needs replacing each year, instead of half or more as is normal with modern hybrid birds. These old breeds are also good converters of scraps to eggs compared to hybrids, which makes them ideal backyard poultry. The heavy breeds make good table birds as well.

Sexing chickens at day-old can be a problem to the small poultry breeder. However they can generally be sexed fairly accurately at six weeks of age by comparing the larger red comb and wattles of the male to the smaller, darker comb of the female. The females usually grow tail feathers quicker than males do.

Genetic sexing of the purebreds at day-old is a fascinating interest. Down colours or shank colours are taken as pointers in a given breed and by careful culling and breeding you can develop a strain capable of throwing an eighty five to ninety percent accuracy to those points. This requires many years of patient work, knowing the genes of both parents for several generations. Figure 1 gives the pointers used.

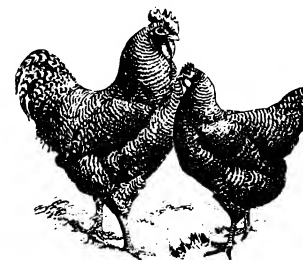
Sexing the heavy breeds such as the Australorp, Wyandotte, and Light Sussex is better carried out at three days old, when

the tips of the wings can be seen beginning to feather on the females. Males take longer.

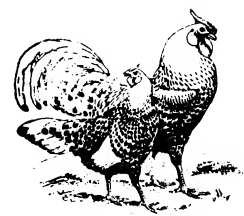
By following these pointers, you can develop your own

Table 1. Early pointers to good purebred stock.

Breed	Pointer
Barnevelder, Brown Leghorn	Pullet: dark stripe along back. Cockerel: paler even colour all over.
Rhode Island Red	Pullet: rich red down. Cockerel: slightly paler red down.
Plymouth Barred Rock, North Holland Blue	Pullet: dark and light shanks. Cockerel: light shanks.
Golden Hamburg	Pullet: brown spot on head. Cockerel: black spot on head.
Buff Orpington	Pullet: lines on the back. Cockerel: even apricot colour.
Chinese Silkie	Pullet: blue skin colour. Cockerel: green skin colour.
Minorca	Pullet: dark shanks. Cockerel: willow shanks
Ancona	Pullet: dark shanks and light feet. Cockerel: even coloured shanks and feet.



Plymouth Barred Rock



Hamburgs

JUST A CACKLE!

by Pat O'Brien, Condell Park, NSW.

Last month I had my three-year-old granddaughter (who lives in a city unit) staying with me. The first morning a cold little hand woke me at 5.30 and she hopped in with me to get warm. 'Goodness', I said 'What woke you so early?' 'The chooks were yelling too loud and made a terrible noise'. I explained they were excited about laying an egg. 'If you did something clever like that you'd want to show everyone, wouldn't you?' Next morning, even earlier, fully dressed she woke me saying: 'Nana, get up, the chooks want to show us their eggs!'

When I look back, chooks seem to have dominated my married life. They were a must with my husband wherever we lived — a case of 'love me, love my chooks.' When he died some years ago, there were 20 chooks in the fowl yard. With time I found I couldn't cope so offered them to my husband's friend, who said he'd come and pick them up. He arrived in his car and I supposed he'd have something to put them in. In pouring rain, the two of us in raincoats and gum boots raced around catching the chooks to the accompaniment of the greatest din ever, and as we caught each one he'd open the car boot and throw them in, slamming it before they had time to get their bearings!

I liked the bantams we kept best, because they were such prolific layers and mothers, sitting on eggs discarded by broody white Leghorns. They were a bit of a nuisance as they were always flying out of the yard, however much we cut their wings, and they laid their eggs up under the house where we couldn't get at them. But Jimmy was the father of all the chickens, and my 4-year-old daughter's pet. He was a cocky little fellow (we actually called him after Jimmy Cagney) and only she could catch him, mothering him like a doll, even trying to comb his shiny brown-gold and black tail feathers. One day, 6-year old son Chris came to me: 'Mum, Jimmy's out on the road'. We didn't have a fence at the time and buses ran by our place, so I rushed to the front window in a panic. 'Where's Kathie?' I called. 'It's all right, Mum, she's gone after Jimmy!'

A screech of brakes and there she was, holding up the bus and two cars while she carefully picked up the bantam from the middle of the road and smacked him saying: 'Naughty Jimmy, Mummy said not to go on the road!'

When Kathie was just toddling, she loved to watch the batches of chickens scratching around the yard and one particular day after rain found they were muddy. 'Dirty', she said, and dumped them in the dog's water to wash them. I'd been out shopping this day and husband was baby sitting. As I put the groceries away I noticed something under the griller which was hot to the touch. When I pulled out the tray, there were six chicks wrapped in an old towel. Husband thought this was the best way to save them after their bath. It did!

One year my husband bought ducks to fatten up for Christmas and promised some to various friends. However, Christmas Eve came, with pouring rain, and husband was late home. People were calling in for their Christmas dinner, and the birds still had to be dressed. Well, have you ever had six ducks plucked on a small enclosed verandah by someone imbued with Christmas spirit? I was days getting rid of those feathers.

And talking of feathers — we had a frustrated blue cattle dog, Gipsy that had a habit of rounding up the fowls when they were let out. That was fine when we were watching, but if they were out when we were not home, she'd round them up and many's the time Chris tearfully reported that his pet Gipsy had killed a fowl. She chased them until they died of exhaustion and there were feathers all over the yard. The first time she was belted and chained up. But this hurt Chris so much that afterwards if it happened he'd go around and pick up all the feathers and wrap up the evidence and put it into the nearest street bin. Husband muttered about having to cut those . . . fowls' wings again, they were flying away too often!

From a child I could never eat chickens or eggs, as all our fowls then were pets with individual names — so it's no wonder I don't, to this day!

More on Inkle Weaving

by Carolyn Davis, Engadine, NSW.

After my previous article (*Inkle Band Weaving*, GR57, p. 18), I thought new readers might like some tips on getting started with this simple but very decorative form of weaving, as there doesn't seem to be much information available.

BUILDING A LOOM

There are several types of inkle loom. It may be necessary to make your own if they are not readily available commercially in your area. This is not a difficult undertaking if you have a little experience in woodworking, but there are a few points to keep in mind:

- You can vary the size to suit your needs, but it will be awkward to use if too large.
- Hardwood is preferable for strength, as there is considerable tension on the loom. Glue and screw joins and pegs.
- Including a tension adjustment — either as shown in figure 1, or several holes and an adjustable peg — allows you a greater range of weaving styles.
- Keep it simple, light and portable.

Check your library for further information (see references at the end of article).

MAKING THE HEDDLES

Having constructed your loom, the next task is to set it up ready for weaving. You first need to make the heddles — short loops of thread that pass over alternate warp threads, enabling them to be separated from the rest of the warp threads to form sheds. To do this:

- Determine the length of thread required for each heddle. Tie a length of thread onto the heddle peg (figure 2) so that its two ends AA are level. Using a knot similar to that shown in figure 5, tie the two ends AA together so that the top of the loop falls in line with XY. Cut off the two ends 1 cm ($\frac{1}{2}$ in) from this knot. The length of thread required for each heddle is then obtained by untying all the knots.

Fig. 1. Construction details for one type of portable inkle loom.

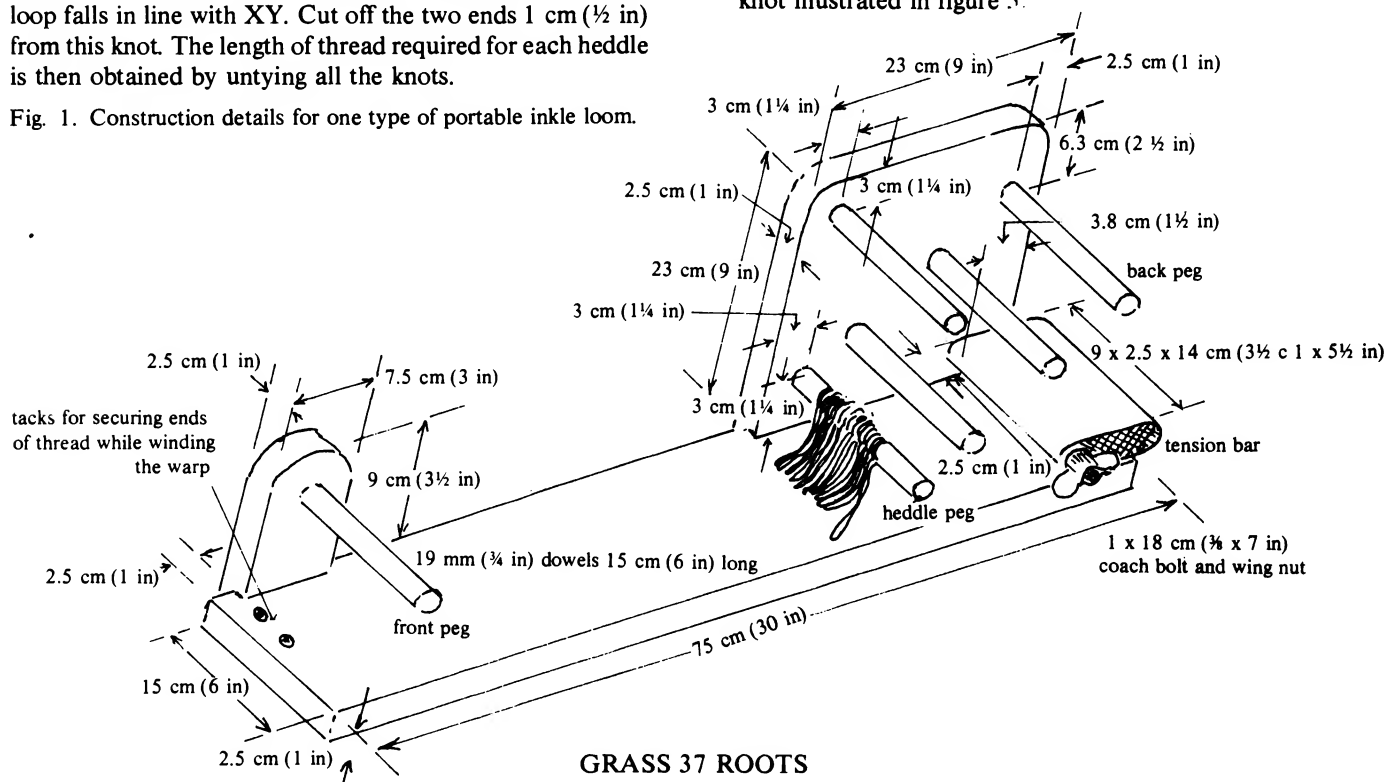


Fig. 2. Measuring heddle length.

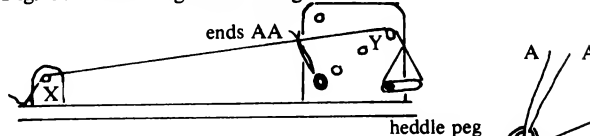
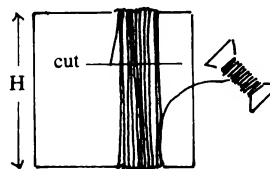


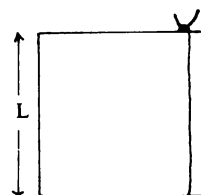
Fig. 3. Cutting the heddles.



- Use this measurement to cut lengths of thread to make the number of heddles required for your pattern. Cut a piece of cardboard or masonite with its height H equal to half the heddle length. Wind the required number of turns of thread around this board (figure 3) and cut along one edge.

- Cut another piece of board with height L so that when the cut threads are tied around the board (figure 4), the ends project 1 cm ($\frac{1}{2}$ in).

Fig. 4. Tying the heddles.



- Tie each heddle onto the heddle peg of the loom using the knot illustrated in figure 5.

Fig .5. Attaching heddles to the loom.

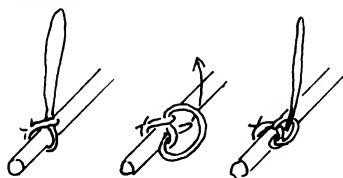
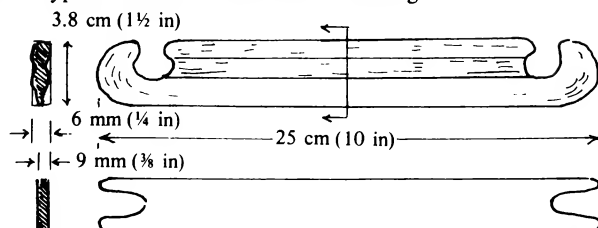


Fig 6. Types of shuttle used for inkle weaving.

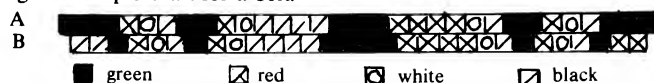


Top: Scandinavian type of shuttle with one narrow edge for beating the weft.
Bottom: Stick type shuttle for inserting extra weft.

WINDING THE WARP

Your loom is now ready to be dressed — the process of winding on the warp threads in preparation for weaving. Choose a suitable pattern, or make up your own (GR 57, pp. 18-19, gives some hints and a basic pattern to help you with this). Your pattern, or draft, may be written out as two horizontal rows of squares showing the different colours required (figure 7), with the bottom row showing warp threads that pass through the heddles and the top row the ones going straight from front to rear pegs (open sequence, figure 8).

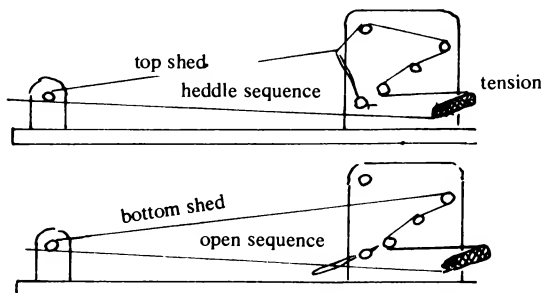
Fig 7. Sample draft for a belt.



After the draft has been prepared, commence winding the warp with the first colour indicated on the left edge of the draft. Proceed to wind the warp as follows:

- Fasten the end of the warp yarn to a clip or drawing pin positioned at the front of the loom.
- Place the tensioning block (if your loom has one) at approximately 15 degrees to horizontal and tighten the thumbscrew. On other types of loom, tension can be adjusted after warp winding is completed.

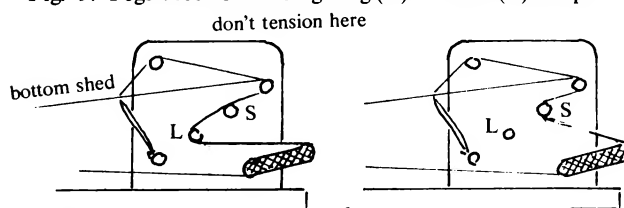
Fig. 8. The two basic sequences used when warping an inkle loom.



- Wind the yarn in a continuous fashion over the top of the front peg, across the loom to the top back peg and continue around the pegs outlined in the 'open sequence' as depicted in figure 8. The second time the yarn is taken around the loom it should be wound through a heddle in a 'heddle sequence'. Continue this alternating sequence throughout the winding of

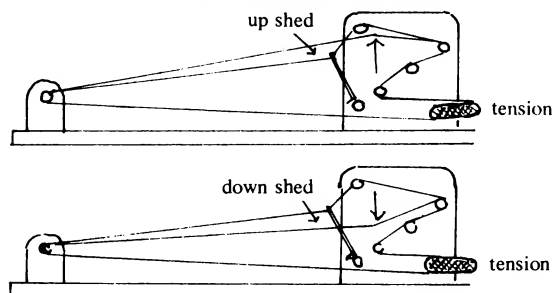
the warp. These two sequences may be indicated on the draft by 'O' — open sequence and 'H' — heddle sequence, or by 'A' and 'B'. Also observe that the warp can be wound around peg 'L' for the longest warp possible on the loom or around 'S' for a shorter warp, depending on the length of band required (figure 9).

Fig. 9. Pegs used for winding long (L) or short (S) warps.



- When changing colours, tie off one end to the other end of the same colour.

Fig. 10. The two basic shed openings on an inkle loom.



By the way, the loom shown on the front cover of GR 57 is incorrectly threaded. The adjustable peg should be placed lower and the loom tensioned from the bottom, so that there is a straight line on the down shed. This makes weaving much simpler because it is easier to form the sheds.

Once the warp has been wound on, you are — finally — ready to begin weaving. Pressing up or down on the open warp threads (figure 10) forms the sheds through which the weft thread is passed to produce the desired pattern. The rest is up to you — enjoy this fascinating ancient craft!

References

Weaving Inkle Bands, Harriet Tidball, The Shuttle Craft Guild, USA, 1969.
The Weaving, Spinning and Dyeing Book, Rachel Brown, Routledge & Kegan Paul, UK, 1979.

FOLKWEAR



Folkwear patterns — for expressing yourself with individuality and creativity. Patterns are chosen for adaptability to contemporary life, timeless appeal, workability and comfort. A collection of over seventy patterns from many countries and historical periods. For women, men and children. For your catalogue send \$2.00 in stamps to Murr Made-Tinker Tailor, PO Box 39 DEAKIN ACT 2600.

Water Under the Bridge

by Pamala Gray, Bentley, NSW.



We had found the perfect piece of land; the kind folk with limited finances just dream about. The two and a half acres were snugly tucked away alongside a sealed road, which ran over a quaint little bridge; the creek running, or rather trickling, under it was a boundary on another side. A dirt road leading to a convent went down the third side, and the remaining side bordered onto a tennis court used by the convent. The house was delightful. It was built of quarried sandstone and had a large verandah around three sides. A 20,000 gallon underground water supply gave all the water that was needed; in that part of WA it was dry for seven months of the year.

As the owner of the property pointed to the beautiful big gum trees and the rich brown soil, we were captivated. The price was incredibly low and we were told we could pay it off over a couple of years. This suited us fine; we were earning enough to get by but not much more. An old two ton truck earned us a living by carting sand, and anything else that could reasonably be carted, and in the winter we carted logs and roots for firewood.

Just before we signed the agreement to purchase the property the owner said 'By the way, there is just one thing I should mention, you might get an occasional flood through here'. We didn't even raise an eyebrow. I think if he'd said they had earth tremors we would still have bought it. It was the kind of place that made you feel you'd been there all your life!

Soon after moving in we added six chooks, five goats and a few ducks to our existing family of a three-legged kelpie and a tortoiseshell cat. Within a few weeks we had a garden dug and planted out. The business was going quite well; we managed to keep a local builder in sand which we dug from anywhere in the bush we could find it, and the local farmers were happy for us to clear roots off their property.

A local storekeeper asked us one day if we knew about the flooding on our little property. We assured him that this had been explained to us, and asked him how often they occurred. He told us there had been minor floods, when the creek would come up to within fifty feet of the verandah. 'But' he added, 'as a rule, a big one comes through every thirteen years.' 'How long ago was the last one?' we asked him. Without batting an eyelid he said 'Thirteen years this year.' He explained that it had to rain an awful lot before this happened. As we walked home over the little bridge we looked across at the chickens happily scratching around in their large pen, and the goats foraging for whatever they could find along the bank of the creek. It looked a scene that nothing could disrupt. We had also made quite a few friends and felt very settled.

Summer was coming to an end and we were looking forward to some rain. The underground tank needed topping up and the grass was looking dry. One night we were wakened by rain on the roof. It continued on and off for about a week and left everywhere nice and fresh. The creek hadn't changed at all. We heard that there had been heavy falls inland, but that didn't worry us unduly.

It wasn't long after this that I was preparing the evening meal and a friend who worked with a road gang dropped in on his way home from work. 'You have five hours to get out!' His words stunned us for a moment, but he went on to say 'The water is over the bridge at Kelly's Crossing, and it will take five hours to reach here.' He offered us help but we said we'd be OK. After he'd gone we walked down to the creek — there was no change, still just a trickle!

We made a half-hearted effort to put our furniture on the roof of the verandah. We didn't have much and what we did have was very light, except for an old kero fridge and our bed which we left in the house. Our clothing we packed and put on

the roof. We decided to leave the bed ready made, so that we wouldn't have to remake it if it turned out to be a non-event, which we were sure it would be. After tea we took another look at the creek. It was 7 p.m. and the water was the same. Don suggested going down every half hour until 10.30, then if there was still no change we would consider the danger to be over.

At 9 p.m. we made another trip. This time there was slightly more water coming through, but it was still possible to jump over to the other side. It was a full moon so we could see everything around us quite clearly. The gum trees looked magnificent in the moonlight. Everything appeared so still and peaceful. Although he felt it was a waste of time, Don went down again at 10 p.m.; there was a wider stream of water but it was nothing to get excited about. He suggested that I went to bed while he made one last check.

It was just 10.30 p.m. and I was almost in bed when I heard Don shout 'Quick! Get out quick!' and he appeared in the doorway with a look of utter disbelief on his face. We grabbed the bedding and dashed out to the truck. As I looked across the tennis courts along our boundary, I wondered for a moment how it was that they reflected the moon like glass. I didn't wonder for long because the next moment I felt cold water swirling around my ankles. The old truck spluttered and coughed as water came up around the exhaust, but with a gallant effort she lurched forward and got us onto dry ground.

Next came the big rescue act. Don half swam and half waded down to the chook pen. The chooks were all huddled on the roof looking down at the rising water with amazement. The ducks were quite happy and the goats had completely disappeared. Actually we hadn't seen them on the creek bank earlier in the evening — they must have sensed something that we didn't!

Don splashed past me clutching some chooks as I was looking for the cat. I tried to entice Maggie the dog to swim up to the front gate, but she wouldn't budge. I staggered along with her, the water swirling around my waist, and put her down alongside the chooks which Don had put in a cray-pot on the side of the road. As I turned to go back and help Don with the rest of the chooks I looked up to the bridge, and there standing like onlookers in a Roman amphitheatre were half a dozen of the locals. It must have been like waiting up on New Year's Eve to see the New Year in — the only difference was this only happened every 13 years!

We were offered the use of an old road board office, and so we moved in with Maggie and the chooks. Next day we found out that because of debris blocking the creek bed further up stream, the water had built up and broken the bank so that it left its natural course and headed straight for our house in one big mass, after which it found its way back on course again. It was a couple of days before we were able to get into the house. We found a thick layer of mud over everything and a 'tide' mark around the walls. The underground tank was full of murky-looking water.

The ducks surfaced from somewhere, looking as though nothing had happened, and the cat was sitting on the roof amongst our belongings. A few days after the water had gone down the local policeman came round and asked if we had lost some goats. He went on to tell us they were 'camping' on his front lawn! So we were one happy family once again. The

house smelled like a swamp for quite a while but plenty of air and sunshine did wonders for it.

We learnt a very useful lesson through this experience and if there are others who are contemplating moving onto a property either to rent or buy, then a careful check with the local shire will tell you where the water-level would come to in the event of a flood. Don't be captivated by a property that you see at its best, or even because it's 'dirt cheap'. Nothing is a bargain if it is going to cause you big problems and heartache. Don't always take the word of an estate agent — his aim is to sell!

Before buying this property last year we had a check-list that we ticked off to make sure it was as hazard-free as possible, also that it had the potential to be as self-sufficient as possible.

We had two major floods in three months this year in the Lismore area, and our creek rose 50 feet above the water-level and the only inconvenience we suffered was that the mailman couldn't get through for a couple of days.

CORRESPONDENCE COURSES

CUT FLOWER GROWING

SELF SUFFICIENCY I

- Landscaping
- Hobby Gardening
- Garden Maintenance
- Advanced Propagation
- Australian Natives

- Propagation
- Crops
- Herbs
- Hydroponics
- Aboriculture

Principal: J. L. Mason
Dip. Hort. Sci. M.A.I.H.

Brochure AUSTRALIAN HORTICULTURAL CORRESPONDENCE SCHOOL
264 Swansea Road, Lilydale 3140
Ph: 03-736-1882
GARDEN SHOP & BOOKSHOP OPEN MONDAY - SATURDAY (Shopping Hours)

NEW PERMACULTURE BOOK AT LAST !!

Bill Mollison's PERMACULTURE: A DESIGNER'S HANDBOOK will be published by August 1988.

This large, hard-cover book includes permaculture design principles & methods, designs for tropical, arid, & temperate climates, aquaculture, soils, earth-shaping, understanding patterns in nature, coping with different climatic factors, alternative funding systems and bioregional organisation, and all aspects of farm design.

SPECIAL PRE-PUBLICATION PRICE OF \$40 (post-free) is now available. Send cheque to:

TAGARI PUBLICATIONS
PO Box 1-GR, Tyalgum 2484

Offers ends June 30, 1988. This book is available MAIL ORDER only!

Care of Lead/Acid Batteries

by Colin Rose, Ravensbourne, Qld.

The humble lead/acid battery has been with us for some 100 years in its modern form. However, the principles of storing electrical energy are not new. The process was known to the Aztecs, who used it to electroplate precious metals. Today, practically all school students understand the principles of batteries, but few people understand the essential requirements needed to service and care for what is one of the most neglected, out of sight, out of mind items of everyday use.

Quite a large number of myths exist, perpetrated even by battery manufacturers and retailers (presumably to lessen the life of batteries and thus increase sales). One such myth is that lead/acid batteries prefer to be charged little and often (trickle charging). This is not true. Doing this causes a highly resistant grey deposit to form on the plates. This is known as sulphation. Because of its highly resistant nature, sulphation reduces the capacity of the battery and its subsequent life.

It is recommended that at least once a month, lead/acid batteries be charged at the 10 hour rate. That is, if a battery is rated at 12V 60 A/h (12 volt, 60 ampere/hour), the charge rate is 6 amps for 10 hours, or whenever the specific gravity (measured by an hydrometer) reaches 1250.

If a battery appears to lose its charge in a comparatively short time, it has a case of sulphation. Despair not. In many cases, treating such a battery with a dose of the 5 hour rate will fix the problem. Simply charge the patient with 12 amps for 5 hours, or until the above S.G. reading is reached. Should the patient get extremely hot under the collar, this indicates that the sulphation cancer is too thick to break down (resistance is too high). Hot batteries warrant a prayer and a scrap metal dealer!

Consistently over charging beyond the recommended 10 hour rate causes hydration. There is no recommended cure for this disease. Quite often, hydration is accompanied by buckled plates which tend to short out the particular cell, rendering it useless.

As with so many other things, cleanliness is critical to efficient operation. Batteries must be kept clean — free of dirt, dust and grease. Dirt provides an easy path for electrical leakage between terminals, and will thus impair the capacity. Ensure that batteries are protected against the elements, but allow air to circulate.

Links used to connect batteries should be made of copper and rated at least double the ampere rating of the battery. The bolts and nuts securing same should be brass or similar non-ferrous metal. This avoids any electrolytic action resulting in corrosion. If your terminals (not yours, but the battery's) are corroded, the simple remedy is to prepare a solution of bi-carb of soda by adding about 3 tablespoons of bi-carb to a litre (1 ½ pt) of boiling water and shlooshing the terminals liberally — it's magic. Be careful not to allow this mixture into the cells — a piece of tape over the caps should suffice. Remember to remove the tape after the bath!

Speaking of caps, always remove caps when charging. Hydrogen, which is highly explosive, is produced on charge, so it is advisable never to smoke near a bubbling battery.

Similarly, make sure all terminals, connectors, etc are secure and not highly resistive — resistance is heat in electrical terms and heat and hydrogen do not mix! When disconnecting battery terminals, ensure you remove the negative connection first. Doing this avoids the possibility of sparks which could ignite that volatile hydrogen.

A good point to remember when buying batteries is to avoid the sealed variety. Buy those with exposed cell interconnecting links, as it's often useful to 'tap' voltages and this can only be done successfully with exposed cell links. Maintain the level of electrolyte about 3-6 mm (½-¼ in) above the plates. Use only distilled water, but not rain water off the roof, as many roofs are of a metal which will contaminate water. Contaminated water, in extreme cases, provides a short between plates, rendering a cell useless.

A few minor points:

- Make sure the vent holes in the caps are free of foreign matter.
- Liberally coat all terminals with petroleum jelly to retard corrosion.
- Every six months or so, arrange with your friendly battery retailer to conduct a cell capacity test. This involves placing a high resistance across each cell, and if the cell maintains a constant voltage over a few seconds it is OK.
- The only reliable indication of the condition of a battery is the specific gravity. Faults or high resistance, such as hydration, within a battery often cause internal voltage to rise above normal. Thus, when a reading is taken, it will be of the charging rate, rather than the battery voltage.

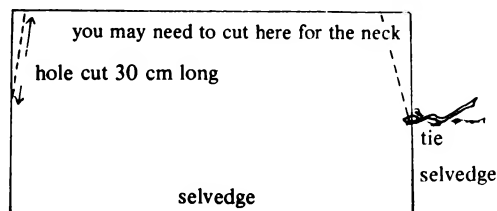
The preceding may sound rather technical, but in reality it's only common sense. If you are prepared to exercise the above servicing techniques, you can expect a life span of 7-10 years from your expensive batteries.

Keep Your Bucks Cleaner and Warmer

by Kim Kuzmich.

A large jute sack with a hole cut out of the bottom collects two-thirds of a buck's spray on the side flaps and makes for a warmer animal.

To make, open one side seam of the sack by removing the string. Cut a hole in the bottom of the bag 30 cm (12 in) long from the remaining joined seam down, which allows for the tail etc. To be effective, leave the sides full length and join at the neck with a string. A surcingle may be added but I have found this unnecessary. Takes about 10 minutes to make.



Reprinted from *Dairy Goat News*, Jan. 1982, NZ Dairy Goat Breeders Association, Hill Rd, Raglan NZ.

WINTER BEE MANAGEMENT

In a very broad sense the Australian climate provides three alternatives for the beekeeping winter (incidentally the official winter season is from 1st June to 31st August, but winter climates may start with cool nights as early as April and extend through to the following October):

- High altitudes above 1500 m (5000 ft), where snow is very common, the daytime temperatures consistently below 16°C (61°F) and the chance of winter flow nil.

- At the other extreme a very mild autumn/spring season with a relative abundance of flora. The far western districts of NSW often provide this environment.

- In between, and covering some 75 percent of this state's beekeeping areas, a variable cold, wet climate with frequent spells of dry sunny weather. Winter flows are common in some of these areas, especially the coast and northern inland.

Winter management is therefore often reduced to a choice between no winter flow or the availability of winter flows whether one takes advantage of them or not. In either case it must be remembered that an integral part of the bee's winter behaviour is the 'cluster'. This enables the colony to keep warm during periods when the temperature is below about 20°C (68°F). The lower the temperature, particularly at night, the more difficult it will be for the colony to break its cluster and fly during the warmer daylight hours.

NO WINTER FLOW

In this environment the hive will virtually hibernate, living entirely on its reserves of food for up to five months. Although winter packing of hives in these environments is not common it would assist all hives to maintain better health and population and reduce food requirements. Winter packing need only be the removal of surplus boxes and reducing the entrance down to a few centimetres. However, wrapping a hessian 'blanket' around the cluster and its food reserves will help considerably. In fact, the survival of small colonies may be entirely dependent on such procedures.

The winter site should be dry — more important than any other factor. Humid air and, worse still, condensation accumulating inside the hive will encourage diseases and materially contribute to high food demand and poor physical condition. A free air space to keep the hive above the wet earth, a hive stand if possible and the cutting down of surrounding grass are important. If the site allows sunshine to maintain a dry environment, so much the better.

The food reserves for a non-working colony are hard to estimate. Food requirements should be thought of as 'heat energy demands', since it's only through metabolising its food that the colony gets heat to keep itself and the hive warm enough for survival. Some beekeepers advocate equal numbers of frames of honey and brood at the start of winter. Others simply do not rob after say March and allow the autumn flow to provide adequate supplies. Whilst one prefers to err on the side of safety, i.e. providing extra food rather than risk late winter starvation, leaving too much honey on the hive is similar to leaving a 'cold brick' in the hive, since it will tend to absorb the precious surplus heat. Experience, sometimes

bought at great cost, is often the best teacher.

THE WORKING COLONY

It's an over-simplification to assert that 'winter flows are no different to that of other seasons except that they make more demands on the vitality of the colony'. Yet the basic truth of the statement cannot be refuted.

Whilst the honeybee has evolved without the need to work a winter flow, some strains, through environmental adaptation in temperate climates, have evolved a partial ability which can be exploited with skilled management. Autumn queen-rearing seems to be an essential prerequisite. The variables of site, hive type, environment, management system and type of winter flora make it impossible to give generalised hints on how to work winter flows. Suffice it to say that providing a dry, sunny and protected site, whilst keeping the hives compact and with some food reserves, are the only real common features of winter management.

The main risks of winter flows are: some honey types upset the bees; and unpredictable weather changes can force the colony into a non-working regime for which it's not prepared. These risks lead to losses by disease, debilitation through premature ageing and starvation. All hives, working or not, are at most risk towards the closing weeks of winter. Ageing and poor nutrition, compounded by rising levels of disease pathogens, are the major problems.

Be very careful of the 'false spring'. This is a warm period of 3-10 days, often occurring in late August to early September, which promotes spring activity. Colonies will break their winter cluster, commence unlimited food consumption and rapidly expand egg-laying and other activities consistent with normal spring expansion. The resumption of winter conditions immediately thereafter throws the colony into confusion. The brood is neglected and underfed, food reserves are depleted — with the result that diseases, particularly Nosema and European foul brood, become rampant. Sometimes beekeepers compound the problem by moving and/or expanding the brood nest. In such circumstances the less interference with the hives the better, and giving sugar syrup as a food supplement is often very helpful.

CONCLUSION

Winter is, or should be, a period of relative quiescence. Autumn management is the key to its success, since preparation for winter is far more significant to the end result than the precise events of winter, which are often uncontrollable at the time. The condition in which hives emerge from winter will determine their productivity for most of the remaining season. Most important, however, is the need to have hives which do die out during winter properly analysed to determine the precise cause of death.

Reprinted from *Bee Briefs*, Vol 1, No 4, a publication of the NSW Dept of Agriculture, PO Box 547, Tamworth 2340.



Natural Goat Care

by Pat Coleby, Garfield, Vic.

I am writing this article just coming up to Christmas, so the last goat for this season has kidded, producing an ordered buck right on the dot, practically to the hour, with the minimum of fuss. It's so much easier to 'catch' kids that arrive at milking time! Each year I run on four kids, and for the first time for five or six years they are looking all I want them to be. There is no doubt at all that CAE catching with no mother's colostrum and heat-treated milk is not the ideal, but it's better than the disease. However, as mentioned in an earlier article, I decided that I'd use liquid seaweed extract as an additive in the milk this year, and I'm more than pleased with the result. I give them two or three drops a week at first, raising it slightly as they get larger, cod liver oil, hypol or whatever in the milk once a week, and occasionally a little extra dolomite in the feed. The four baby girls look really good, and are very active, with none of the stately, rather thoughtful behaviour that signalled slight selenium deficiency last year.

I learnt something new too. Two does came on the place rather deficient in minerals and vitamin A, so I fed them up as much as possible, but one cannot right those sorts of conditions completely for about a year. When the first one kidded the kid had knuckled over front legs, as though the tendons were too tight. It happens in about 10 percent of kids, and seems to right itself in time, though some take longer than others. This time I felt that perhaps the mother's chronic vitamin A deficiency was somehow implicated. The kid got three A & D capsules (human variety) down its throat, and to my amazement the legs were OK in two hours. When the next doubtful doe kidded, the same trouble showed up, and the same treatment brought the same result, so it's not a fluke.

A friend in trouble with a doe with really bad prolapse asked if I had any ideas, so I suggested she try Calc. Fluor. from the tissue salts range, ten tablets crushed up night and morning for a few days. This mineral has nothing to do with sodium fluoride, which is a poison. Calcium fluoride is needed to maintain muscle tone. I did not expect great results, but we got them; the doe showed improvement in a few hours, and continued to do so, until she looked normal instead of trailing half her insides out all the time. Artificial means of stopping prolapse never work in my experience; stitching up the vulva is the most popular, which horrifies me. What happens if you are not there when the doe kids? The other method is a sort of inverted coat hanger with the hanging bit shoved into the goat's back end to keep everything in. The only two times I used it, under veterinary instruction, it ruptured the placenta early, and each time a dry birth followed with dead kids and doe.

Years ago we were all taught that dead doe kids and live males means iodine deficiency, but one tends to forget, until this year someone rang with a doe with two dead kids, and wanted to know what could have caused it. They were not putridified apparently, and were a few days early. Early kids in my experience ALWAYS means that all is not 100 percent right with the doe. There were several options — the ideal would have been to have got the kids to the vet for a post mortem, but they wouldn't bother. Firstly it could have been

toxoplasmosis, (caught from cats) which causes the kids to be aborted or born dead. One advantage to it being this is that the goat would then have developed an immunity and it almost certainly would not have happened again. It is impossible to keep cats away from goats, so like childhood ailments one just gets it over and done with. The second cause could have been iodine deficiency, which I favoured, as a lot of goats have been showing signs of low iodine this year, but as there were no buck kids to be alive in the family one could not be certain about that either. CAE, which it was not, as these does are free, could also have been the cause — anything can happen when they've got that.

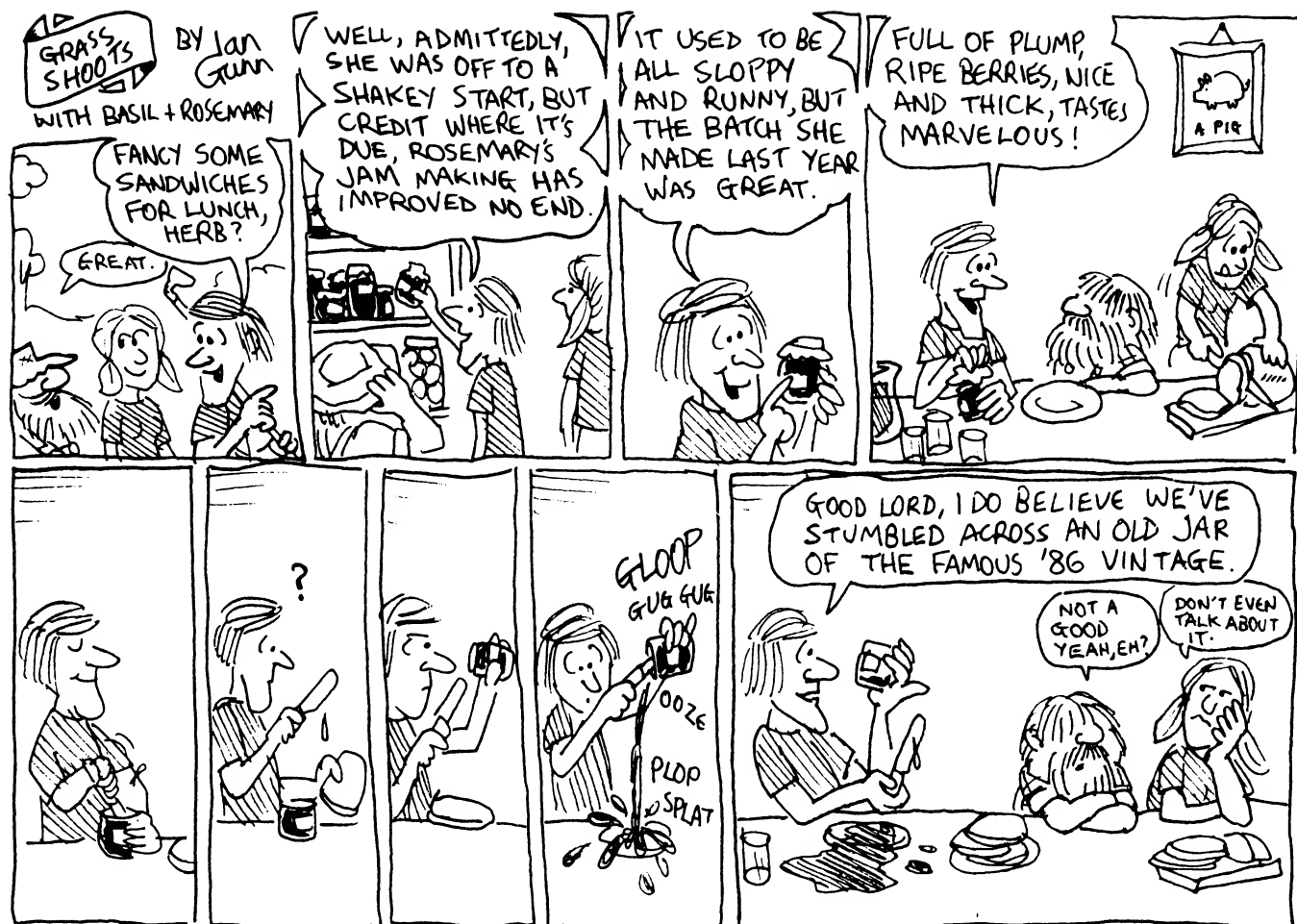
This article will appear about mating time, I guess. I still hear many people who should know better complaining about large percentages of buck kids. The reason is always the same — too many legumes in the feed, either clover, lucerne, soya, lupins or whatever. Keep the does and bucks on a good plain ration at joining time if you want a fair ratio of doe kids.

Which brings me to the last subject — yet again — worms. Drenches are not the answer to worms — good management is, especially of pastures. Earthworms and dung beetles are only too keen to take goat manure down below the surface, but they neither of them like sour depleted soils with a pH of 5 or below. Worms thrive in goats that are copper deficient, also in goats that are low on vitamin A. If everything is in good order it should not be strictly necessary to worm a goat more than twice a year, one of those times being when they kid (or freshen as in the case of does milking through two years) about August or September. Stick to one drench that works, and do not swap them around; that practice, once so widely advocated, but no more, has caused more so-called drench resistant worms than anything else. With drenches of the not-so-toxic variety like Nilverm or Thibenzole, I like to give a third more than the makers recommend. Often one under calculates the weight of the doe, and too little of a drench does indeed create a drench resistant worm. Good management practices, such as ensuring the goats have dry feed — hay as well as concentrates — available every morning, so they are not obliged to go out and eat grass with the dew on, will keep worms down. Overstocking is another common reason for worm infestations; if one runs too many animals they have to be hand fed above ground level to keep them healthy.

TREATING GOATS POISONED BY PLANTS

You will need baking soda and paraffin oil, your drench gun and bucket. Dissolve one tablespoon of baking soda in 1 litre (approx 2 quarts) of warm water (not icy cold). Drench each affected animal with 150 ml (approx ¼ pint) of this. Allow an interval of a quarter-hour or a little longer, then drench again with 25 ml (1 fl oz) of pure paraffin oil to each animal. The baking soda neutralises the excess acid which forms when toxic plant material is eaten and the oil then speeds up the elimination of the offending stomach contents.

Reprinted from *Dairy Goat News*, June 1983, NZ Dairy Goat Breeders Association, Hill Rd, Raglan NZ.



SIMPLE FELTING

by Susan Sawyer, Morwell, Vic.

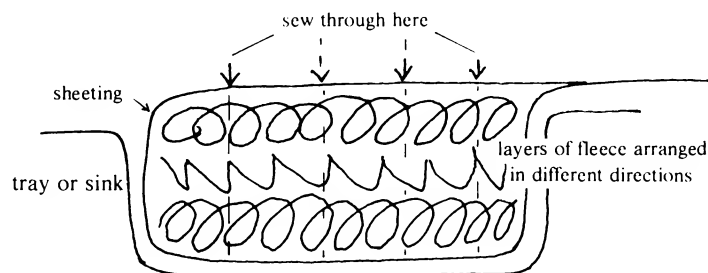
Short pieces of fleece unsuitable for spinning can be used to make a piece of felt. You will need the following:

- boiling water
- a cake of laundry soap
- sheeting
- needle and thread
- a deep tin tray or sink
- short fleece
- rubber gloves

METHOD

Make sure your fleece is well carded and has no lumps or bits in it. Then lay the sheeting in the tray or sink and arrange a layer of fleece on top in one direction, second layer in opposite direction and, using a third layer in the same direction as the first, the whole thing will be quite high. Now fold the sheeting across the top and, using the needle and thread, sew through the top to hold it all together.

Put on the rubber gloves and pour boiling water over the top and soap both sides well using a circular motion. Now plunge the piece into cold water and squeeze gently. Repeat the whole process several times, the longer you rub the better the result. When you feel it has been reduced enough in height, unpick the threads, take off the sheeting and peg out to dry.



You can arrange patterns by varying the colours of the fleeces. Try starting with something small like a pot holder, but remember to allow for 5 cm (2 in) shrinkage all around during the process.



NAMEMAKERS®
CRAFT LABELS

"LABEL YOUR HANDMADES"

Design your own labels from variety of type styles, materials and colours. 12mm and 24mm wide. 25 upwards. Send 33c stamp for information and samples. **Namemakers** - GR. 5 Grange St., Toowoomba. 4350. Ph. (076) 32 5378.

The Best of Grass Roots

The Early Years

The Early Years is a reprint, by popular demand, of the first five issues of *Grass Roots*. In its pages is an amazing collection of hard-to-find information from making sleeping bags, raising an orphan lamb to making bread, cheese and yoghurt.

p/b 240pp \$14.50 post paid.

Family Book

This is a diverse collection of stories about Australian lifestyles. The readers' stories illustrate how different families adapt their needs to create a lifestyle that is personally satisfying — role reversal, extended families, home birth, birthdays, pets and recycling.

p/b 144pp \$6.50 post paid.

Fireside Reader

This book is packed with stories and practical information. Stories of how winter used to be as well as plenty of up-to-date crafts and activities such as growing trees for firewood, embroidery, making jams, crosswords, knit a pair of slippers and make your own earrings.

p/b 136pp \$7.50 post paid.

Earth Builder's Companion John & Gerry Archer

The *Earth Builder's Companion* is a manual on how to design and build your own earth house. This book contains all the information you need to put a roof over your head without council hassles or a 25-year mortgage. Full of helpful advice on design principles and practice.

p/b 136pp \$7.50 post paid.

Bumper Book

The *Bumper Book* is a special Christmas publication in which readers have come together in the true spirit of Christmas and have shared their thoughts, philosophies and ways of living. It has stories on self-sufficiency and instructions on how to make Christmas gifts.

p/b 136 pp \$4.50 post paid.



Grass Roots: PO Box 764 Shepparton 3630

GRASS ROOTS Back Copies — A Useful Resource.

All one price — \$3.50 each, posted

Issues 6, 7, 8, 9, 10, 16, 17 out of print.

No. 11 Geese, owner-builders, producer gas, hand-woven shirt, breakfast, the house cow, natural cold remedies, Cotter, low energy housing, splicing.

No. 14 Recycle a windmill, soap making, permaculture, bees, applique, herbal teas, button making, tipis, fowls, musical instruments for kids, foxes.

No. 19 Train a bullock, fireplaces, log cabins, pesticides, natural poultry keeping, natural health, goats, inkle weaving, selecting wool for spinning, cheese making.

No. 22 Community gardens, renovating a wooden house, tip ratting, natural health success story, donkey pack saddle, yeastless bread, organising a community market, marquetry, index 13-21.

No. 25 Alternative schooling, make a kaftan, spaghetti, select a water pump, birth of a donkey, herb repellents, travel Australia, megavitamin therapy, root basket, eucalyptus oil, sheepskin jacket, recipes.

No. 28 Make a tent, surviving venomous bites, macrame bouncer swing, bushfire safety, ducks, horses, butter churn, home grain milling, home-made wind generator, portable chicken coop, yurts, make a bridle. 106-page edition!

No. 31 Mules, hooked rugs, simple weaving, building a smokehouse, electric fencing, plait a belt, beadwork, growing garlic, chiropractic, the Welsh love spoon, manual washing machine, growing mushrooms, farm holidays, tofu.

No. 34 Buying a caravan, starting a craft shop, pendulum power, simple weaving, herbs in the kitchen, the year of the cow, herbal cosmetics, trees for fire protection, hayband weaving, gourds, conserving water, tethering animals.

No. 37 City farm in Brunswick, weeds, soap, sock basket, battery hens, feral animals, spinning fancy yarns, woolcraft hints, homespun socks, potatoes, do-it-yourself pest control, fuel stove hints, oil seed press, electric fencing, index 30-35.

No. 40 Make a doona, energy-efficient houses, hand-made gifts, home energy systems, Angora goats, street games, growing garlic, quilts, building in stone, poultry, bushfire precautions, horseshoe pitching.

No. 12 Tipis, keeping pigs, nuts and seeds, raw fleece rugs, ducks, boomerangs, pumps, nettles, tapers, home brewing, hair care, gardening, recycling a dairy.

No. 15 Stained glass, wattle and daub, dandelion coffee, goats, spinning, Murray crays, beer, soap recipes, feeding native birds, self-sufficiency city style, organic simple surveying.

No. 20 Training goats to harness, salads, stone house, make a lampshade, sourdough bread, eucalyptus candles, combating depression naturally, organic gardening, simple surveying.

No. 23 Shoemaking — a small business, urban gardening, solar hot water, mudbricks, alternatives to milk, lease a farm, fruit from seed, start a country market, bantams.

No. 26 Guide to Qld, poisonous plants, choose a horse, chappatis, furniture refinishing, using weeds, woolcrafts, donkey harness, weaving rugs, introduction to worm farming, a vertical axis windmill, small-farm stories.

No. 29 Growing peanuts, vegetarianism, screen printing, making jam with honey, healthy felines, surviving in the tropics, geese, new fruits, soy products, dripper irrigation, steam distillation, budding and grafting, felt making, 12-volt electric fences.

No. 32 Gipsy touring, rabbit keeping, plastic water tanks, how to run a kero fridge, choosing a house cow, laying a stone floor, handspun knitting, floor polish recipes, termites for chicken feed, beach combing, patchwork.

No. 35 Hydroelectric power, responsible homebirth, gourds, trees for soil conservation, water tanks, rush seating, donkeys, stretching muscles for heavy work, dyeing with fungi, child's tipi, playgrounds, reviving home orchards.

No. 38 An unusual craftsman, attracting birds to the garden, stained glass, living without electricity, growing soybeans, carnivorous plants, ducks, silk spinning, stone building, hard cheese, lengthening jumpers, build a bush shed.

No. 41 Snakebite, rejuvenating an old cottage, seaweed, make a bush shirt, solar electricity, poultry, weld without a welder, build a gipsy van, grow and spin flax, setting up a water supply, micro-irrigation, alcohol fuel.

No. 13 Permaculture, soap making, earthworms, herbal teas, Bredbo, queen rearing, owner-builders, education and kids, index 1-12, gardening, dyes, goats.

No. 18 Mud ovens, solar energy, no-dig gardening, raspberry farming, hay sheds, acupuncture, weaving, poultry, tractors, stone masonry, living off craft.

No. 21 Balcony gardening, working donkeys and mules, knitting with handspun wool, bookbinding, fabric craft, cementing a water tank, minerals for health, amateur farming.

No. 24 Small-scale hydroelectricity, butter making, life on an island, poultry shed, canvas blinds, community building, saddlebags, turkeys, wheat, skin care, vegan recipes.

No. 27 Button making, windmills, ducks, build a pottery kiln, pigeons, saddlery, plucking geese, craft markets, cabbage pest, spinning without a wheel, motorised gypsies, soil quality.

No. 30 Educating children, using a sickle, pigs, sheepskin boots, Guinea fowl, homeopathy, jojoba, mudbrick sauna, grafting fruit trees, wind power, make a halter, soymilk products, hot water systems, smoking meat and fish, index 22-29.

No. 33 Life in PNG, an alternative lifestyle in NZ, a poultry coop, recycling, home brewing, organic farming, kefir, backstrap weaving, a possum trap, Cashmere goats, horse gear, cooking grains, fruit growing, alternative schools.

No. 36 Happiness and hardship — recollections of times past, make a doona, building for women, peacocks, donkey training, simple construction techniques, strawberry growing, recycling bottles, more on peanut growing, medicinal herbs.

No. 39 Bushfire protection, making quilts, solar fruit drying, Angora goat keeping, build a bush shed, make a haystack, keeping bees, fruit and nut growing, circle gardening, diet and hyperactivity, making herbal perfumes.

No. 42 Living on your own — for women, cow bails, drying mushrooms, garlic, quail, children's stories, alcohol fuel, donkey training, drying flowers, green manure, solar electricity, blackberry eradication, pruning, self-sufficient health, care of flammable liquids.

No. 43 Festivals, rag rugs, tanning, tree felling, bee keeping, stonemasonry, bantams, children's parties, biogas, citrus in sub tropics, butter from goats milk, donkey training, kefir, tin oven and battery-operated blender, foster mothers for calves, wind power.

No. 46 Herbal first aid, removing unwanted fauna, op shopping, building bee boxes, propagating trees, dog fleas, unemployment, dried fruit, handmade gifts, mouse traps, turkey keeping, alternative lighting, tomatoes, jojoba, garden soil.

No. 49 Buying a donkey, buckwheat, aloe vera, locker hooking, vaccination debate, charcoal, life in Kenya, medicinal herbs biogas, growing Australian plants, make a halter, growing from seed, make a gourd lamp.

No. 52 Solomon Island, natural beauty tips, ginger beer, pigs, gardening with limited water, Christmas gifts, make a shirt, Folk Flower tonics, wire-weed basket, water tanks, passionfruit, moon planting, animal manure, a house for free, survival technology.

No. 55 Sheepskin vest, sawdust kilns, recycling the family garbage, chickweed, companion planting, willow baskets, eradicating household pests, basic beekeeping, horse power, star posts, electric fencing, tree planting, hydroponics, cure for colds, centaury.

No. 58 Horseback journey, gifts, soap, paper stars, healthier life, growing food, knots, water systems, renovating, toilets, face masks, cows, animal care, chess set, pest control, holiday tips, alternative power, summer top, bananas, hydroponics, garlic, buying land, herbs.

No. 61 Crofting, winter wellness, chestnuts, poultry, breadmaking, using a wood stove, organic farming, cottage gardens, short wave radio, woolcrafts, spinning wheel care, agroforestry, chair repair, knots, bullocks, pruning, earthworms, firewood.

No. 64 Moora Moora revisited, hydraulic press, Christmas gifts, coping with overindulgence, incubator, remaking a beach umbrella, Elizabeth duck, retraining a dog, conveyancing, goats, health care, solar food drying, popcorn, 12V power, hay quality, guinea fowl, wine, cheese.

No. 44 Pollen traps, herbs for colds, Barnevelders, a sundial, tools for self-sufficiency, child's saddle, floral wood dyeing, gardening in sand, water wheel, 'oldies' make the break, wind power, house cow for \$35, index 36-42.

No. 47 Marketing, horse power, making buckskin, living afloat, herbal medicine, stenciling, gardening, manure spreaders, building an extension, poultry, a bush shower, backyard farm, beekeeping, garden trouble-shooting.

No. 50 Networking, bee pests, cheap hot water, growing coffee, designing a jumper, cold climate gardening, moccasins, growing liquorice, coffee, geese, AATRA, crossword, growing Australian plants, biogas, rainwater separator, home-made beer and cider.

No. 53 Bushfires and mudbrick houses, enamelled badges, tuning your car, guinea pigs, soya, home-made bag, water power, fruit growing, country living, old orchards, rainforest, peafowl, cool safe, preserving eggs, milking cows, weaving on a bike wheel.

No. 56 Holiday camp, yurts, paper making, milking a goat, a garden ecosystem, prickly pear, tagasaste, locker hooking, chocolates, bandages, sundial, natural cancer care, pot-belly stoves, beans, effects of chemical insecticides, raising beef cattle, hydroponics.

No. 59 Fire protection, continuum concept, Pritikin eating, first aid, starting out, renovation, pigs, making butter, tanks, watercress, root cellaring, mirror frames, sheep, looms, solar power, home-acre farming, keeping bees, gates, small tractor, pest control, make a farran.

No. 62 Importance of water, grass baskets, female nutrition, fences, cottage gardens, bees, conveyancing, hydro-electricity, starting a garden, woolcrafts, generators, WWOOF, game birds, agroforestry, polenta, bullocks, greenhouses, sheep, seed saving, 12V system.

No. 65 Finding your dream, fruit bottling, bushfire safety, start a shrubbery, pottery, leucaena, winemaking, summer skin care, backpack, purebred poultry, batteries, cord wood building, mangoes, bio-dynamics, 12V wiring, pickles, concrete, water systems, food irradiation.

No. 45 Turkeys, waistcoats, touch for health, a bush sauna, sinking a well, northern lifestyles, beetroot, fly traps, storage batteries, a cow halter, herbs, swarm traps, strawberries, build your own gates, improving your soil, caretakers.

No. 48 Dry-stone walling, coconuts, dole survival, biogas, felt hats, natural pest control, fruit trees, layering, beekeeping, herb garden, greeting cards, jojoba, wildcrafting.

No. 51 Stained glass, self-recycling garden, dog kennels, scented pelargoniums, baby socks, heart attack alternative, possums, water supplies for a small farm, geese, native tree planting, fossil fuel, biological bird control, handicapped children, beekeeping. Index 43-50.

No. 54 Cotton ball spinning, Ecuador, Althorpe Island, wind-powered bicycle, vegetarianism, pawpaw, octagons, hydroponics, rugs for animals, lice and goats, tofu, electrical tools, flax and linen weavers, tanning hides, eradicating bracken fern, disinfectant, crossword.

No. 57 Inkle band weaving, your immunity, jackfruit, black sapote, what to do if you're sprayed, cows, tools, black currants, raising piglets, lavender, gifts, how to make an incubator, head lice, electric fencing, hydroponics, pollination, an inexpensive water tank. Index 51-56.

No. 60 Host farm, beads, garden tools and methods, soils, steam cooking, first aid, power alternatives, tantrums, cottage gardens, dog training, torch, weeding, tapestry leftovers, sheep and lambs, garden pests, small trailer, alternative blender, bullocks, seed saving.

No. 63 Alternative employment, power systems, homeopathy, home hatchery, possessory title, cottage gardens, donkeys, bees and honey, inexpensive gifts, starting a garden, forge, pickled olives, waste disposal, building with bottles, greenhouses, game birds. Index 57-62.

Grass Roots Binders

These are made from tough, dark brown vinyl with a white logo. They hold 8-10 magazines as well as *The Early Years* and any of the Companions. An ideal way to keep your library together and prevent the neighbours pinching your back copies. Price \$9.95 includes post and packing.



Stickers:
80¢ each



GRASS ROOTS: PO BOX 764 SHEPPARTON 3630.

BOOKS!

BOOKS!

BOOKS!

BOOKS!

BOOKS!



INCREDIBLE

BARGAINS

in

THE BOOK NEWS CLEARING SALE



Most Books
Half Price or Less



Something
for Everyone



Out goes all our surplus stock at amazingly low prices! Send large SAE for lists of books on cooking, craft, gardening, health, building, self-sufficiency and more. But hurry — some titles have already sold out!

PO BOX 764 SHEPPARTON 3630

GRASS ROOTS ORDER FORM

Grass Roots: PO Box 764 Shepparton 3630, AUSTRALIA

Good News for Subscribers!

Even though the price of GRASS ROOTS has risen, our new subscription price is now only \$20. This means the magazine is delivered direct to you at cheaper than retail price.

SUBSCRIPTIONS

Australia \$20.00 for 6 issues

Overseas A \$26.00 for 6 issues

(International money order only)

Commence sub. with.....

NEW ZEALAND READERS

For subscriptions

Send NZ\$20.00 to:

R.Hill & Son Ltd

Ideal House, Eden Street

Newmarket

Auckland, N. Z.

For books send money orders

(in A\$) direct to Grass

Roots at the above address.



Backyard Poultrykeepers Calendar \$6.50.....
 The Fireside Reader \$7.50.....
 The Early Years \$14.50.....
 The Family Book \$6.50.....
 Bumper Book \$4.50.....
 The Earth Builder's Companion \$7.50.....
 Binders \$9.95.....
 Grass Roots Stickers 80¢.....
 Grass Roots Cards \$4.80.....
 Australian Goat Husbandry \$8.50.....
 Starting a Nursery or Herb Farm \$8.50.....
 Making Unemployment Work \$9.50.....
 The Bullock Driver's Handbook \$15.50.....
 Communicating With Nature \$9.50.....
 Winning Over Worry \$9.50.....
 Secrets of Success \$15.50.....
 The Householders' Compendium \$10.50.....
 Tagasaste (revised edition) \$10.50.....
 Subscription \$20.00.....
 Community Markets \$13.50.....
 Growing Nuts in Australia \$20.50.....
 Going Tropical \$15.50.....
 Back Issues @ \$3.50.....
 Nos.....

TOTAL \$.....

Name

Address

Postcode

(BLOCK LETTERS PLEASE)

(Office: Dargalong Rd. WAHRING)

GRASS ROOTS READERS SURVEY

Here it is at last — the bigger, brighter ‘Grass Roots’ readers survey! Following our New Year’s resolution to make the magazine even better than before, we need your help. We really appreciate the regular feedback from readers about what they like — or dislike — in GR, so we thought we’d make use of as many of your ideas as possible by including a proper questionnaire for you all to complete. The information you give us will be invaluable: the more we know about your lifestyle, your plans, hopes and interests, the more effectively we can provide what you’re looking for in ‘Grass Roots’. You’ll notice that we’re not asking for details so much as general areas and categories — that way, we can build up an overall picture of our readership and pinpoint which aspects of the magazine we need to develop further.

We're really looking forward to seeing the responses to this survey as soon as possible. We know you'll be interested in the results too, so we'll evaluate the information as quickly as we can and let you know what we've discovered and how you want the magazine changed to meet your needs. Here's to a bright future for 'Grass Roots' and all who read it!

PLEASE TICK THE APPROPRIATE SPACE OR FILL IN INFORMATION REQUESTED.

PERSONAL PARTICULARS

- 1. Age:**
- | | | | |
|----------|-------|-------|-------|
| under 20 | 20-29 | 30-39 | 40-49 |
| 50-59 | 60-69 | 70-79 | 80+ |
- 2. Sex:**
- | | | |
|--|-------------|---------------|
| | male | female |
|--|-------------|---------------|

LIFESTYLE

3. Do you live in a _____ city? _____ country town? _____ rural property? _____
4. How many are there in your household? _____
5. Do you live in a co-operative? _____ yes _____ no _____
6. What is your dietary preference?
- _____ vegetarian _____
- _____ vegan _____
- _____ omnivorous _____
- _____ other (please specify) _____

WORK

7. How do you earn your living?
- salaried job _____
- own business _____
- agriculture _____
- pension/benefits _____
- other (please specify) _____
8. If you have a non-agricultural business, please describe it.

LAND

9. Do you own rural land? yes _____ no _____
10. If yes, in what area is it situated? (eg northern NSW) _____
11. How many hectares? (approx) _____
12. Do you use it for any agricultural enterprise? yes _____ no _____
If so, please describe the enterprise. _____

13. Do you intend to buy rural land in the future? yes ____ no ____
If so in what general area? _____
How many hectares? (approx) _____

14. Are you planning an agricultural enterprise? yes ____ no ____
If so, please describe it. _____

INTERESTS

15. If you have interests in the following categories, please tick them. (extra ticks for special interest)

lifestyle alternatives	_____	farming	_____
health	_____	animals/livestock	_____
crafts	_____	alternative technology	_____
building	_____	gardening	_____
cooking	_____	other (please specify	_____

THE FUTURE

16. What changes do you expect in your lifestyle in the next 5-10 years? _____

GRASS ROOTS

17. How many people in your household read GR? _____

18. What other magazines or newsletters do you read? _____

19. How many of your friends borrow your GR? _____

20. Which regular features of GR interest you most? Please tick.

practical articles	_____	While the Billy Boils	_____
readers' personal experiences	_____	Down Home on the Farm	_____
Feedback	_____	Information Available	_____
book reviews	_____	Grassifieds	_____
other (please specify)	_____		

21. If you've had letters published in Feedback, were you happy with the responses you received? Please explain.

22. How can we improve *Grass Roots*? _____

23. Are any sections of the magazine no longer relevant? _____

24. Do you have any further suggestions? _____

SEND YOUR COMPLETED QUESTIONNAIRE (AND ANY OTHER IDEAS, HINTS, CRITICISM OR PRAISE) TO: READER SURVEY, GRASS ROOTS, PO BOX 764, SHEPPARTON 3630.

HOMEMADE SOAP

by Marion Boetje, Brooweena, Qld.

Making soap by hand and using your own soaps can be very satisfying. Handmade soaps are quite different from commercial soaps, having a luxurious feel and often an individual look about them. With each batch varying from the next, the process of making soap is both interesting and frustrating. I always feel a slight sense of relief when the batch has finally set and I can examine its character.

In making your own soap, you will find that because you control your ingredients you can avoid colours and scents or other additives so many people are allergic to. Handmade soap is also economical, although it won't compete with the cheapest supermarket specials. However you will get such a mild product that cleans so wonderfully and feels so luxurious that after the first batch you won't want to compete with the supermarket specials anyway.

I first became interested in soap-making 12 years ago when I saw some very rough laundry bars made by an old-timer out in central Queensland where we lived at the time. This soap was hard (boy, was it hard!), yellow and smelt of rancid fat, but I was hooked. It cleaned like a beauty and left the skin feeling soft and smooth. I wrote off to bookshops and finally obtained a couple of books. Ann Bramson's (see references below) proved the best and was virtually my bible for a couple of years until I began experimenting on my own account.

GR 13 carried a very comprehensive article on soap-making. This issue is still available and the article will tell you all you need to know about methods and a few basic recipes as well. These are an excellent starting point for making soap at home but I have put together a few tips which may be helpful, as well as some suggestions for using ingredients commonly available in Australia.

SAFETY

Always follow safety precautions to the letter. I *never* make soap when small children are around and am always super careful with caustic soda. Even so, I've had the occasional lungful of caustic fumes and a couple of near misses, such as the time when the bottle I'd used for years for mixing the lye suddenly cracked (it gets very hot) and out poured a couple of litres of hot lye — luckily into the sink. We had the cleanest drains in the district!

INGREDIENTS

Lye

- Make your lye from caustic soda, not other drain-cleaning compounds which may have extra ingredients to sabotage your soap.

- Always use cold water to mix the caustic. Even slightly warm water will greatly raise the temperature of the lye. And believe me, a boiling caustic concoction bubbling up over the top of its container is not pleasant. Nor are the fumes.

- Add the caustic soda to the water and not the other way about. This will prevent a concentrated hot spot in the base of

your container and will minimise the chance of breakage if it is glass.

- 500 g coffee bottles make good lye containers. Stand the bottle in the sink on a cloth to lessen the temperature differences between the cold sink and the hot mix. Leave the seal in the lid and with a hot nail pierce two holes in the top for pouring. This gives a fine even stream which can be mixed well into the fats.

Oils

It is your choice of oils and experiments with their proportions that give you the greatest scope for variation in your homemade soaps.

Tallow Most soaps have a tallow or beef fat base. Of course, if you kill your own animals and can render fat on an outside fire or inside stove (if you can stand the smell), then it's the cheapest way to get tallow. A butcher in a country town offered to get me some semi-rendered tallow from the local abattoirs, where he 'always went for lunch'. (I didn't try to figure that one out!) I took him some milk tins and some finished soap and he got me as much semi-rendered fat as I wanted — for nothing. I still had to complete the rendering but it was cheap.

For fat, I also sometimes use Supa-Fry (blended animal and vegetable oil). This makes a good substitute for dripping (tallow) and is often cheaper. Plain label, unbranded solid fats can also be used but I find the quality varies. This sometimes causes difficulties with the mixture not saponifying or the soap not setting. The soap may remain soft or jelly-like. **Olive Oil** Don't be tempted to use medicinal olive oil. It is far too expensive in the amounts needed. Cooking or salad olive oil is fine, and even that will cost nearly an arm and a leg, with big price hikes occurring recently. I get 4 litre cans but am investigating larger containers.

Coconut Oil A certain amount of coconut oil is desirable in soap for aesthetic reasons. It produces beautiful bubbles. Traditionally, Castile soap had no coconut oil and had a creaming, rather than a frothing lather. However, if froth and bubble is your thing, use some coconut oil. Not too much though — it can be drying to the skin. About 15 percent of total oils will give you soap for lathering in hard water. Coconut oil is available from chemists in small jars. Buying copious quantities may cause your concerned pharmacist to enquire, as mine did, whether you are encouraging all your friends to fry themselves in the sun.

Coconut oil is also available in bulk from Auroma, PO Box 187, Richmond 3121 at reasonable cost. As well, Copha makes a good readily available substitute.

Using the recipes in GR 13, you can play around with the oil proportions as long as the total oils remain the same for the given amount of lye. Just remember that a high proportion of olive oil will make a hard, brittle, creaming soap, close to traditional Castile and difficult to cut. A high proportion of coconut oil will produce a soap that may be rather drying but

with beautiful bubbles and which will lather even in sea water!

Vegetable Oils Many people will prefer to make soaps which contain no animal fats, and beautiful soap can be made using only vegetable oils. Australian Crisco, which is a cooking oil, and not the solid white shortening mentioned in American soap books, makes a mild soap. Light yellow in colour, its texture is very fine and it has a luxurious feel to it. However, it is very difficult to saponify and slow to set. Its appearance may go from yellow to brown over a few months but this does not affect its properties.

Most vegetable-based cooking oils make fine soap when mixed with olive oil and/or coconut oil but you need patience in the making of the stuff. You'll wonder why you even started as you wait, sometimes for days in cold weather, for your mixture to set. Persevere, it is worth it!

Beware of using margarines. Many are animal and vegetable fat blends. They make great soap but they also contain colours and other products you may want to avoid.

METHOD

If you follow GR 13 as far as the methods for making handmade soap go, you won't go wrong. The main points to remember are:

- Exercise great care and observe safety precautions.
- Follow temperature recommendations exactly.
- Don't underestimate the amount of stirring required.

Under-stirred soap will be granular, brittle and open-textured. Well-stirred soap will be smooth and dense. And you won't know until it's too late. So stir for at least ¾ hour initially and stir the vegetable oil one at intervals thereafter until it saponifies.

- Allow sufficient time for the soap to cure. During this time keep it away from metal surfaces and utensils as the chemical change is still proceeding. Curing for 3 to 4 weeks in an airy place is essential.

Hopefully, these few notes will encourage you to look up other information on this subject and will fill you with enthusiasm to make your own soap. You'll soon come up with ideas for varying your basic soap recipes to make an even more useful and personalised product.

Part II next issue will explain what to do if things go wrong with your soapmaking.

References

Soap — GR 13, pp. 24-28.

Handmade Soap, GR 58, p. 20.

Soap — Making It, Enjoying It, Ann Bramson, Workman Publishing Co, NY 1972. This is an excellent book and well worth obtaining if you can.



BOOKS ON NATIVE PLANTS, WILDFLOWERS ETC.

Over 200 Titles Including Specials

SEND 40c STAMP FOR LIST TO—

GATTON PLAZA NEWSAGENCY & BOOKSHOP

GATTON PLAZA SHOPPING CENTRE

GATTON, QLD. 4343

TOWN & COUNTRY FARMER MAGAZINE

AN
INDEPENDENTLY
OWNED AUSTRALIAN
MAGAZINE

AUTUMN
ON SALE
NEWSAGENTS
NOW!

• RAISING SEEDLINGS
• Seed Collecting

- JOHN LAWS —
ON THE FARM
- FACTS ON FENCING PT III —
CONTROL OF FERALS —
TRAINING GOATS
- AGROFORESTRY —
COLLECTING SEED, STORAGE
AND RAISING SEEDLINGS
- PINE FOR PROFIT!

- SHEEP BREEDS
- IN-BUILT FIRE PROTECTION
FOR BUILDINGS
- AQUACULTURE
- WELDING
- ANIMAL HEALTH — FLUKE,
WORMS, ANTIBIOTICS

— PLUS LOT'S MORE —

DON'T MISS YOUR COPY!

SHINGLES. AUSTRALIA'S.

THE NATURAL ALTERNATIVE

Whether they're hand split by experienced craftsmen or taper sawn at the mill, our hardwood shingles are the perfect roofing material for the natural house. They're cut from either Forest Oak (*casuarina torulosa*) or mixed hardwoods selected for their beauty, strength and durability.

SHINGLES AUSTRALIA — the leading commercial supplier of high quality traditional style shingles, and exotic and unusual hardwood panelling.

AUSTRALIAN TIMBERS FOR
AUSTRALIAN ARCHITECTURE

Brochure and price list available from: Shingles Australia, Stokers Siding, NSW 2484.
Telephone (066) 779333

CRYPTIC GRASSWORD

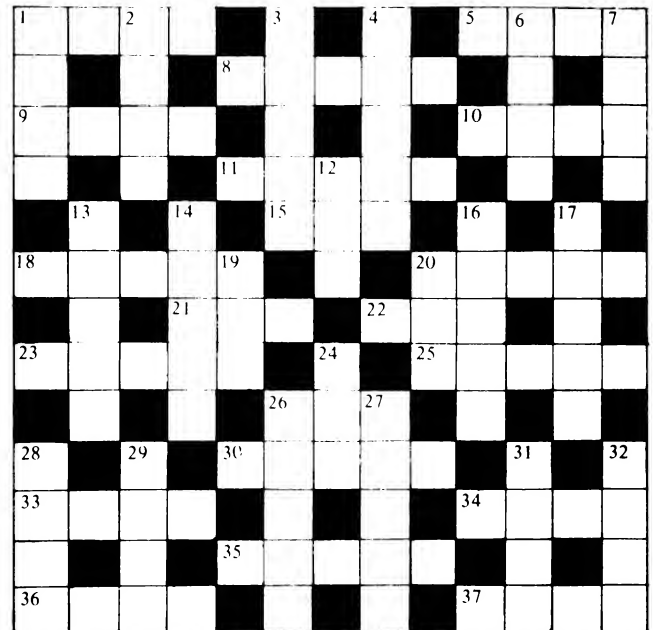
by M. Riley, Newborough, Victoria.

Across

1. Around four he makes insect house.
5. Space about moor.
8. Support stiff walk.
9. Correct sound for time.
10. Tree's sticks.
11. Ash in September.
15. Tap back.
18. Rag we use to make a bet.
20. Lot at arranged sum.
21. Knock about par.
22. Unsweetened air.
23. Sat to mix drink.
25. Why new swan gapes.
26. Piece of work for biblical character.
30. No dye for senior diplomat.
33. Laid about face.
34. Tree yearn.
35. No Meg for garden dwarf.
36. One fish.
37. Elf's confused ego.

Down

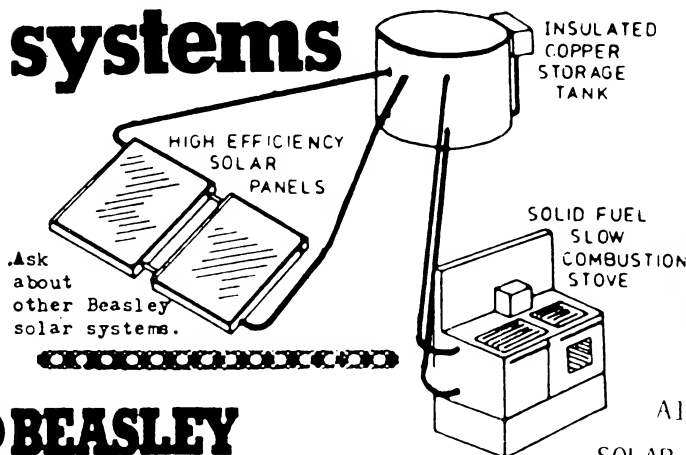
1. Popular songs become this.
2. In place of evil.
3. Wicket tree remains.
4. Quite confused with no noise.
6. Blame on us unchanged.
7. Untidy eating place.
12. Bar from the bank.
13. Staff to continue innings.
14. Short rest around point.
16. Trusty alloy mixture.



17. Pledges board men.
19. Art for rodent.
20. Attempt to remove from tray a test.
24. Apparently shy but why in company?
26. Union roast.
27. Of light horizontal timber.
28. Does change poems.
29. Autumn drop.
31. Similar preference.
32. It turns in volume in autumn.

Solution on page 63

solar hot water systems



Going Solar

ENERGY AGRICULTURE SELF SUFFICIENCY

320 Victoria Street, North Melbourne 3051
(03) 328 4123

Also available from Going Solar:

SOLAR ELECTRICAL SYSTEMS Design & Equipment
MUD BRICK MOULDS & PRESSES.
SILVER BATTS The Safe Insulation.
VEGETABLE & HERB SEEDS. PLANTS & TOOLS.
BEEKEEPING EQUIPMENT. FLOUR MILLS.
BOOKS & MAGAZINES on all of these subjects
*Call in, phone, or send three stamps
for the latest catalogue.*

BEASLEY

The nearest thing to free hot water

In Victoria, Beasley Solar & Coonara Wood Stoves are sold by Going Solar.

COONARA HEATERS
LEADING THE WAY IN WOOD HEATING

Poetry

OP SHOPPING

*I went to the op shop this morning,
I love going there, don't you?
It's the Salvation Army, it's for a good cause
So I spent a dollar or two.
I've been feeling a bit jaded lately
and I don't like doctors you see,
So a trip to the op shop is just what I needed
It acts like a tonic for me.
I love browsing around the bookshelves,
I often pick up two or three.
But there wasn't much there this morning,
(Someone had been before me!)
I needed a couple of new outfits,
my last years 'models' are torn.
So I got two frocks and a jacket
Quite nice, just like new and not worn.
Then I spotted a lovely pink bedspread
Thirty cents, the tag said.
It can go to my brother, in Maldon,
It'll do nicely for his double bed.
I got a real bargain, this morning,
A lovely tweed jacket for Sid.
Get a load of the maker's label,
it must have cost three hundred quid!
We'll go to a teashop one morning next week
He can drape it over his chair
And when customers read the label they'll say
'Those two are rich over there!'
There's a bit of risk in op shopping
As no doubt you are aware
You can be in the High Street in your neighbour's dress
And you'll know, by her cold steely stare.
You can be sitting in church in your op shop hat
And as friendly faces you seek
You suddenly realise where you'd seen it before —
It was sitting on 'er 'ead, last week!!*

Sybil Gray.

DUSK

*Nightfall,
Wispy shadows on a blurred horizon,
One final flutter of feathers and day-birds turn for home.
That sudden stillness of the wind,
As the daylight dies.*

*In reverence, all nature pauses in silence.
I too, respect this moment.
Peace and calmness seep through my pores.
It's my time for reflection on the day,
Its achievements and failures.*

*My time for taking pleasure in complete idleness,
A calm, before the storm of night routines,
Momentary sanity in my crazy world.*

Do not disturb!

Lynne Bryant.

FOR EASTER

*All through the year especially up north,
The rabbit clan is hated.
They earn the farmers' ire and wrath,
And traps are set and baited.
But Easter comes and then we find
The 'rabbit' has gone to ground.
He's become a darling 'bunny', mind,
That no one dares to hound.
For the 'bunny' symbol lures the shopper,
Makes sure he spends his money
On chocolate eggs, a kiddy stopper,
Brought by the Easter Bunny.
An amnesty of just four days
Is all the bunny gets.
Just time enough to mend his ways
And pay off all his debts.
But Tuesday morning now is nigh,
And once again he's 'rabbit'.
He sheds a tear and waves good bye
It's back to that rabbit habit.*

Margo Carlisle.

FRIENDSHIPS

*Friendships, when they are real
are the solidest things we know.*

*Friends don't need to lie or deceive
each other, nor use and abuse.*

*Friends can give advice but are not
offended when the advice is not heeded.*

*With a friend, there is no need for
pretence, nor empty words.*

*Friends share anger, rage, torment,
love, understanding, but mostly
acceptance, acceptance of each other.*

Friendships can fade, but they never die.

*Friends with love and understanding
are always there, especially when
the need is the greatest.*

Be aware, know your friends, believe in them.

*Friendship is fit for serene days,
and graceful smiles, but also for
rough roads and hard work.*

Gail M. Clarke.

BLACKBIRDS

*The blackbirds
return again
on the lawn
four of them
charcoal birds*

*beaks open like pegs
knife pitched voices
sharp as drawing pins*

*are their eyes absent
or black as the interior
of antholes?*

*intensely scanning
the undergrowth
one has a gumnut
another a twig
third buried amidst leaves*

*the last
standing on a rock
with wings in pockets
and a worm
droops a moustache
from her mouth*

Jules Leigh Koch.

THE INVITATION

*Potatoes in their jackets
And pumpkin golden yellow
Beans and brown lamb chops,
The gravy makes them mellow.*

*Silverside that's seeped
With peppercorn and carrot
Succulent and juicy
Served with beans haricot.*

*Crunchy roasted lamb leg
With green garden peas,
Mint sauce and brown sauce,
Potatoes as you please.*

*Irish stew or mincemeat,
Meat pies in pastry,
Sausages or braised steak
Pork crackling tasty.*

*If you come to my house
You may make selection,
You bring the home brew,
Kitchen's my direction.*

Helen Denman.

CYCLONE

*Gale-force winds,
squalls,
torrential rain . . .
Virile saplings bend
and touch the ground
in obligatory worship,
lopped, life and limb.
Trees rent asunder uproot from mother earth.
Something snaps
inside.
Water, choking, gurgling,
scours the yielding earth.
Sodden, spongy, damned, earth can take no more
and suddenly gives way
to the angry flood
flowing freely out of control;
nothing can stem the tide.
Winds buffet
and the helpless birds
plummet
from the feral sky
to drown
in the swirling, turbulent,
swathian
reaches of the Flood.
Nature seeks unquiet refuge
from itself
in elemental fear.*

*Morning
and the ashen skies
repent
to admit the sun.*

*Man unshelters
and sees another country
devastated;
a shaken, battered earthling
he visits
the scene of devastation
and vainly tries
to piece together
the ungainly jigsaw
of the fallen world.*

Edwina Toohey.

FREEDOM

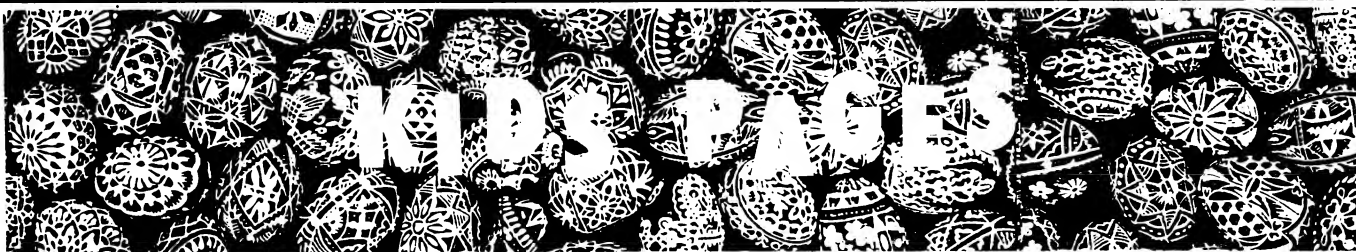
*Silver maned horses
Run free in the moonlight,
galloping silently
on through the night.
Ceaselessly travelling
up the high country,
quietly traversing
by light of the moon.
Silent their footfalls,
reckless in movement,
manes flying madly with gathering speed.
Steadily onwards
unknown goals to conquer
their wild flight of fantasy
dispersed with the dawn.*

Jean Opperman.

COASTLAND THEATRE

*Angelic hang-gliders on high,
Silhouettes set in the sky,
Floorboards of sand,
A sea-splashing rock band
And a backdrop of sail gliding by.
A ballet of surfers at sea,
A chorus of seagulls ashore,
The dimming daylight,
A curtain of night
And star gazers round the stage-door.*

Michael Riley.



Dear GR Kids,

Hi, I'm writing this from boarding school on a quiet Sunday when there are only seven of us in. Most of the girls are weekly boarders and go home Friday night so it can be pretty boring here when there is just a few of us. This year I'm in a room with four others — Melanie, who shared with me last year, Amanda and Katrina and Santos who comes from Sri Lanka but whose parents are missionaries in Samoa. She's a full time boarder too and it's nice to have company at the weekends. Bronwen, my weekend friend from last year has been able to move home now that her parents are back from Bangladesh but I still see her at school during the week.

Yesterday I went ice skating — it was really great. All the full time boarders in my house went (there are three boarding houses at the school, mine, a second one for the senior girls, and one for boys) and it was just fantastic. My feet are sore today but there are no bruises and I can't wait till we go again.

Next weekend is half term and I get three days at home. I'm really looking forward to seeing how much our kittens have grown and having a cuddle with Megg's latest acquisition, a tiny ringtail possum. Apparently Kerry my best friend back home gave it to her. Kerry's brothers had found it by the side of the road and brought it home but Kerry thought her cat might eat it so asked Megg to take it. It sounds gorgeous and I can just imagine Megg, she loves baby animals and will be spoiling it rotten.

Better stop now — bye till next time.



Suni.

Dear Suni,

I like your letters and hearing about what you do. I'm in grade six this year but later on will go to boarding school. It sounds lots of fun from your letters. Do you still like it? In the holidays two of my friends from town came out to stay and we slept in a tent in one of the bush paddocks. It was fun until Zoe, one of my friends knocked our water over and then we had to go back to the house and Dad said it was too hot to be in the bush. We are going to do it again at Easter. Bye for now.

**Melissa Thorpe
JERILDERIE 2716.**

Hello,

We have just got back from camping at Johanna River. Johanna River is in Otway National Park near the beach. Mum nearly stepped on a snake. At the beach we dug a hole in the sand and then we made walls of sand around it so the water could not get in.

**James Garrett
VIOLET TOWN 3669.**



DID YOU KNOW . . .

The modern Easter egg made from chocolate or cardboard and filled with sweets dates from the latter years of the nineteenth century.

The custom of exchanging eggs is very old. The ancient Egyptians often dyed eggs in bright colours and gave them to their friends. The dyes all came from leaves or flower petals with the exception of the colour scarlet, which came from a dried insect.

THE STORM

*I remember that storm
Rocking, tilting, full sails.
Giving me the scare of my life.*

*The thunder roared,
Clouds moved in,
The lightning flashed,
Becoming, flashing, pouring rain.*

*The storm receded.
Clouds moving away,
Thunder now distant, lightning vanishing.
The ocean now tranquil.*

*The moon disappeared and the sun rose.
The gulls swooped by.
And there was a gentle fresh breeze filling the air.*

Yvonne Robertson.



EASTER FUN

Egg rolling is an old Easter custom still practised in northern England. It usually takes place on Easter Sunday or Monday and involves rolling coloured hard-boiled eggs down a hill until they crack and then they are allowed to be eaten. Sometimes this game turned into a competition — last egg to crack was the winner.

How do you start a flea race?
Say 'one, two flea — go!'



COOKS CORNER

WHOLEWHEAT DROPSCONES

- 1¼ cup wholemeal SR flour
- ¾ cup milk
- 1 egg
- ½ cup finely chopped nuts or dried fruit

Whisk the flour, milk and egg together with a fork. Add nuts, then cover and leave to stand for an hour. Beat again just before using. Heat a lightly oiled heavy-based frypan or griddle. Drop spoonfuls of mixture onto hot frypan. Cook 2-3 minutes, turn with an egg lifter and continue cooking until golded brown and cooked through. Flatten with the egg lifter if the dropscones are too thick. Make all the mixture up re-oiling the frypan when necessary. Butter to eat, and add honey or peanut butter if preferred.



An Easter Bunny to Make



Last year we featured lots of ideas for making and decorating Easter eggs (GR No. 60, pp. 62-63) and instead of repeating this, we thought that this year we would tell you how to go about making a sweet little Easter bunny.

You don't have to make it in white, you could use any colour you like and whilst felt is very easy to work with — it doesn't unravel or fray — you could instead use finely woven woollen material or even strong cotton. Having decided on your material, don't forget to iron the creases out and then you are ready to start work.

You will need:

- 23 cm felt
- scraps coloured felt for inside ear
- strong thread for stitching
- 2 small beads
- stuffing — washed sheep fleece, cotton wool or cushion filling

Fold your material in two.

Copy the pattern using lunchwrap or tracing paper and then place on your folded material. Pin and cut out.

Pin the darts together on the underbody and sew using backstitch or a small close stitch. If your material is patterned these should be sewn on the inside.

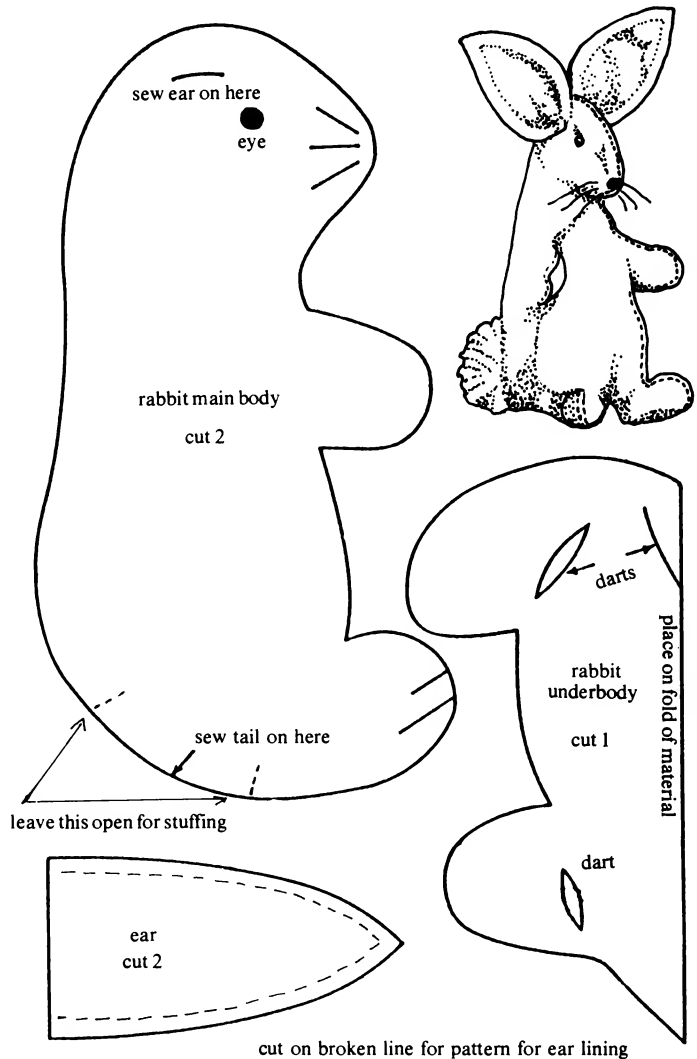
Pin the back seam of the main body together, and then the seams under body to the main body. Join using backstitch or buttonhole if you can do it, which looks much nicer. Leave a small opening around the tail area for stuffing.

Stuff the rabbit, using a blunt pencil or pen to gently ease stuffing into hands and feet. Sew up the opening.

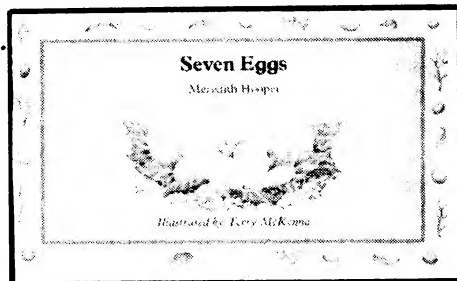
Sew on beads for eyes and then make whiskers and nose.

Line ears with lighter coloured fabric either sewing or glueing in place and attach to the body with a few firm stitches.

Make a pompom or use a ball of cotton wool or washed fleece and attach to the body with a few stitches. The tail will help balance your bunny so he sits properly.



BOOK REVIEW



Seven Eggs by Meredith Hooper, hardcover, 20 pages.

This is a delightful story for young children with pre-schoolers probably enjoying it the most. The story describes the hatching of seven eggs over the space of a week. If like me

you associate hatching eggs with birds and poultry you are in for some wonderful surprises — would you believe penguins and frilled neck lizards are just two of the unusual babes that hatch. And of course every good story must have a little twist and the ending here will appeal to those children (and adults) who enjoy chocolate Easter eggs.

Seven Eggs is a very cleverly written and produced book and although relatively expensive, it is worth the few extra dollars. The author and illustrator have managed to present material the littlies must get to know — like simple numbers and the days of the week — in an exciting and unusual way. *Seven Eggs* is sure to become a favourite and with its hard cover will be able to stand up to the wear and tear of constant reading.

Published by Patrick Hardy Books, UK and distributed in Australia by J.M. Dent, Melbourne and Sydney. RRP \$13.95

While the Billy Boils...

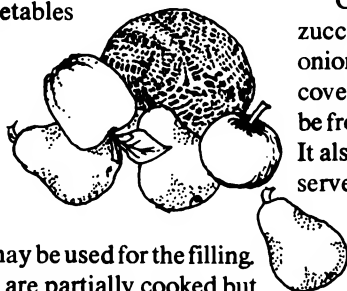
Have you produced an excess of fruit and vegetables this season? We always seem to have a surplus that takes up space in the fridge or across the laundry floor. Here are some tasty ideas from readers that may help you cope with your bumper crops. Happy eating!

STUFFED VEGETABLES

Almost any vegetable your garden grows can be stuffed. When you find yourself with a surplus, one idea to use them quickly is to fill vegetables with vegetables. Choose the vegetables you wish to stuff and scoop out the pulp.

Vegetable-grain Stuffing

- 3 cups finely chopped vegetables
- 2 tbsp oil
- 1½ cups cooked grain
- ¾ cup cottage cheese
- ¼ cup chopped parsley
- ½ cup grated cheese
- 1 tbsp bread crumbs
- herbs to taste



Any combination of vegetables may be used for the filling. Lightly saute them in oil, when they are partially cooked but still crunchy stir in the rest of the ingredients. Allow the mixture to cool before using as a filling.

To Stuff Tomatoes or Peppers

Cut the top off the fruit and hollow out. With the tomato leave a wall about ½ in thick and keep the pulp. Fill the hollowed fruit with the prepared stuffing (as above) and bake in a greased baking dish for 30 minutes in a moderate oven. If desired the peppers may be blanched in boiling water for 10 minutes to soften them.



Stuffed Cucumbers

- 3 cucumbers
- 1 tsp salt
- 2 hard boiled eggs, finely chopped
- 4 spring onions, finely chopped
- 1 tsp finely chopped parsley
- 1 tsp finely chopped chives
- 1 tsp dijon mustard
- 1 clove garlic, crushed
- 1 dill pickle, finely chopped
- black pepper
- 3 tbsp mayonnaise

Cut 1 cm slice off the top of each cucumber and peel with a vegetable peeler. Remove the seeds from the cucumber with a melon baller or long-handled spoon. Rub ½ tsp salt inside each cucumber, leave to stand 20 minutes, drain and dry inside with a towel. In a mixing bowl combine the rest of the ingredients. The mixture should be firm and hold the spoon; if necessary add more mayonnaise. Firmly pack the mixture into the cucumbers. Wrap in foil and chill for three hours. To serve, unwrap cucumbers and slice on a slant in 1 cm thicknesses.

Anita Crosby, Paynesville.

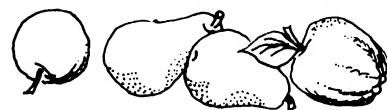
VEGETARIAN SOUP STOCK

- 4 zucchini (or 1 marrow)
- 4 tomatoes
- 1 large onion
- herbs to taste
- 1 tbsp butter



Chop onion finely and saute lightly in butter. Prepare zucchini and tomatoes, wash and chop roughly and add to onion. Tomatoes can be peeled if you prefer. Add herbs, cover and simmer until soft. Puree the lot. This mixture can be frozen very successfully and used as a soup stock in winter. It also makes a very pleasant and refreshing cold soup as it is, served with a dollop of sour cream and chives to garnish.

Lorna Thelma, Ardmona.



SAVOURY MELON SALAD

- 2½ cups unpeeled apples, cubed and dipped in lemon juice
- ¾ cup cantaloupe balls
- ¾ cup honeydew balls
- ½ cup diced celery
- ½ cup mayonnaise
- 50 g (2 oz) crumbled blue cheese
- parsley and chopped walnuts to garnish
- lettuce leaves for serving

Combine apples, cantaloupe, honeydew and celery. In a separate bowl blend the yoghurt, mayonnaise and blue cheese. Add this dressing to the fruit, toss and chill for several hours before serving. To serve, spoon onto lettuce leaves and garnish with chopped walnuts and parsley.

Vivian Barr, Richmond.

FRUIT SHERBET

- ½ cup light honey
- ½ cup water
- 4 cups peeled, pitted fresh soft fruit
- 2 tbsp lemon juice
- 2 egg whites



For 1 litre (2 pt) of sherbet, warm the light honey with the water until the mixture has combined. Puree the prepared fresh soft fruit. Any soft fruit or berries that you have an excess of are suitable, but, peaches, nectarines, strawberries, cantaloupe and honeydew are recommended as delicious. Combine the fruit with the honey-water syrup and fresh lemon juice. Process the mixture in an ice-cream maker until almost firm. Add stiffly beaten egg whites and continue processing until firm. Serve, or freeze for storage.

Margaret Woolford, Albany.

Custard, Real Custard

by R. McKenzie, Karratha, WA.

The trouble stems from the sort of custard that is made out of a packet. People have been subjected to it too often as children and in institutional cooking, and think that it is the real thing.

Actually, packet custard-powder has the dubious honour of being one of the first ready-mixed convenience foods. It was invented by Birds in 1846, and quickly became a standard sauce. The exact composition of the powder is secret, but it contains cornflour, yellow dye, salt and 'flavourings'. Mixed with hot milk, it is called custard, and has ruined many a good pudding. At a pinch it can be used to stick labels on parcels, but should on no account be eaten!

Real custard sauce is a fragrant delight, and can be made easily if you have a steady hand. You will need a double-boiler, or a bowl which can be set on a pan of gently boiling water. Custard should not be made on a direct heat. The more slowly that you raise the temperature as it cooks, the better the custard. Basically it is made out of eggs and milk. Two eggs will thicken about 500 ml (18 fl oz) of milk. More yolk than white makes a thicker custard with a richer colour. Use one whole egg and two yolks, or four yolks only.

Flavour the milk by simmering it in a milk pan over direct heat with a vanilla pod (or bay leaf) and some lemon rind for ten minutes. Sweeten it to taste with a little sugar or honey, and then remove the pod or leaf and let it cool until well off the boil. Beat the eggs in a basin. Pour the cooled milk onto them, stirring all the while. Then transfer the mixture to the top of a double-boiler. A bowl set in a pan of boiling water is often more convenient because the round bottom of the bowl enables you to stir the mixture more thoroughly as it cooks.

Cook over gently boiling water, stirring continuously with a wooden spoon. You will feel the sauce change in consistency as you stir. It thickens. Continue stirring for a moment or two longer until it is unmistakably thick and creamy and coats the

wooden spoon. Then stop cooking at once! Take the sauce off the heat, stirring all the while, and pour it into the serving vessel. This is a critical moment because if you continue the cooking for too long the sauce will separate into curdled lumps and runny liquid and it cannot be brought back. You will have no choice but to give it to the dog, have a large glass of port or whatever to settle the nerves, and start again.

If this is all too stressful, you can chicken out and make what is called pastrycook's custard. It's the custard filling you find in eclairs or sponge sandwiches, and spread on the top of millefeuilles. Heat half a cup of milk with a drop or two of vanilla essence. Mix two egg yolks into a smooth paste with one dessertspoonful of cornflour and a little sugar to taste. Work the hot milk into this paste until all is smooth, and then bring the mixture to the boil and stir until it is satisfyingly thick. Edible, but not nearly as good as the real thing.

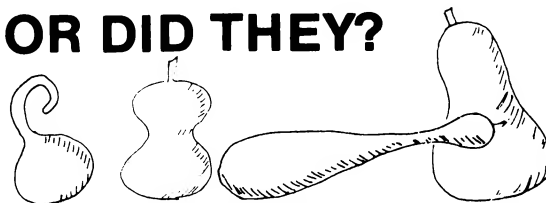
Instead of cooking real custard sauce in a double boiler, you can pour the mixture into a shallow fire-proof dish (or individual serving dishes), and bake it in a low oven for at least two hours. Sprinkle the top with grated nutmeg and serve it hot or cold. It is delicious with stewed fruit. Sprinkle raw sugar on the baked custard to make a layer and cook it for a while under the grill. If you do not let it blacken and burn, the result will be creme brulee. And, finally, if you make a custard mixture and pour it into little pots that have been coated with a mixture made from equal quantities of sugar and water cooked until it acquires a pale golden colour, and bake them in the oven, you have the famous creme caramel. Turn them out of their pots when cold, so that the caramel is on top and trickles down the sides of the baked custard.

With whichever recipe you use, good old custard leaves the nursery, and becomes very up-market. You'll never touch the packet variety again.

SO, YOUR GOURDS ROTTED: OR DID THEY?

Freshly harvested gourds with all their beauty and colour are approximately 90 percent water. This sounds like perfect rotting conditions, but it is not so. We know of no positive way to preserve the natural beauty of freshly harvested gourds for a long period of time. The design and colour is in the skin, so as they dehydrate or dry the colours fade and begin to turn brown. Yes, they often mould but seldom rot. Wait, don't throw them away. They are just getting ready for their future use. Handle them gently, put them in a dry place out of the way.

Wipe off excess mould now and then. If they have shrivelled then toss them out, but if only moulded just have patience for a few months. When they are very light and the seeds will rattle give them a soaking bath in warm water, scrape the outer skin and mould off with a knife, rub with steel wool, dry with a rag, and set aside. When the gourds are very dry sand lightly. Now you have a beautiful tan or light brown smooth gourd ready for wax, shellac, paint, carving, wood



burning or anything you like. With a little wax over those beautiful designs created by the mould the gourd is an object of beauty in any room of the house.

An easy way to cure gourds is to just leave them outside on the trellis to freeze in cold areas of the country or put them on a wire rack where they can freeze and have air circulation around them. When dry spring days come, most of the skin loosens and cleaning is easy. However, the designs created by the mould will be missing and the seeds will not germinate well.

No, gourds don't rot if mature, they just mould and dry up if you let them.

Reprinted with permission of: American Gourd Society, PO Box 274, Mt. Gilead, Ohio 43338 USA.

GREENHOUSE MANAGEMENT

Part V

by John Mason, Lilydale, Vic.

Conditions in a greenhouse or glasshouse can be different to growing plants out in the open. While a greenhouse does some very positive things for the plant (e.g. protects from frost, wind and cold), it can, unless watched, also cause some negative effects. Humidity (the amount of water vapour in the air) is usually higher, imbalances can occur in the proportions of gases making up the air and the temperature can sometimes go too high in a glasshouse unless proper controls are instituted. All of these three things can influence the performance of different plants in different ways.

POLLINATION

For fruit to be produced by most plants, pollen (a dust-like material which is equivalent to male sperm) must move from where it is formed on a flower to settle on the stigma (another flower part) and hence fertilise the female part of the flower. If this process doesn't happen properly or on the right scale, the flower is not fertilised and usually the fruit will abort (drop off before developing). In a glasshouse, the high humidity can cause the pollen to stick and not move as easily. The fact that a glasshouse is shut off from the outside can restrict the movement of insects which might normally transfer pollen from flower to flower. It can become necessary with some plants for the grower to move the pollen about by hand.

Tomatoes grown in glasshouses are usually pollinated by hand every one or two days after flowering begins. The best time to do this is on bright sunny days between 10 a.m. and 3 p.m. If there is cloudy weather for more than 2 days, raise the temperature to 24-27°C (75-80°F) for 1 hour before you pollinate. Immediately after pollination, lower the temperature to 18-21°C (65-70°F). Ventilation will also help pollination of tomatoes. If there is no significant problem with humidity, tomatoes may pollinate without assistance.

Low temperatures seem to affect tomato pollination of flowers a couple of weeks after the period of low temperature. While flowers already open might pollinate, flowers which open about 2 weeks after temperatures below 14.5°C (58°F) pollinate poorly in a glasshouse. Day temperatures over 32°C (90°F) and night temps over 18°C (65°F) also cause pollination problems.

VENTILATION

Use of vents and fans to control both temperature and the balance of gases in the glasshouse environment is a very important aspect of the management of any greenhouse. In very large houses, the use of forced air fans becomes even more important. Air passed through fans can be heated or cooled for additional temperature control. By connecting fans to an electronic thermostat, it is possible to have them switch on and off automatically when ventilation is needed for temperature control. Plants inside a glasshouse should be kept clear of vents or fan outlets (temperature variations can be more extreme in these positions).

FRUIT CRACKING

This problem is more severe during late spring and early autumn than at other times. Cracking becomes worse as fruit ripens. With tomatoes, shading the greenhouse in very warm weather or harvesting before full ripening will help reduce cracking problems. Excessive moisture (overwatering) may also cause cracking in many fruits and vegetables.

OPTIMUM GROWTH REQUIREMENTS

The table below provides information as to the optimum growing conditions for a variety of plants.

Plant	Temperature °C/°F	Humidity	Light
Asparagus	16-20/61-68	low	full sun
Green beans	20-25/68-77	moist	full sun
Beets (red etc)	5-25/41-77	dry-moist	full sun
Broccoli (sprouts, cauliflower and cabbage are the same as broccoli)	15-20/59-68	low	full sun
Capsicums	20-30/68-86	low	shaded
Carrots	10-15/50-59	moist	full sun
Corn	25-30/77-86	moist	full sun
Cucumbers	18-25/64.5-77	low	full sun
Eggplants	27-32/80.5-89.5	low	full sun
Lettuces — requirements vary between varieties	12-15/53.5-59	low	full sun
Onions	10-25/50-77	low	full sun
Peas	13-18/55.5-64.5	low	full sun
Potatoes	15-18/59-64.5	moist	full sun
Pumpkins	20-25/68-77	low	full sun
Rockmelons	18-24/64.5-75	low	full sun
Spinach	15-18/59-64.5	low	full sun
Tomatoes	21-27/70-80.5	low	full sun
Turnips	5-10/41-50	dry-moist	full sun
Watermelons	25-30/77-86	moist	full sun

Adiantum (maidenhair)	20-30/68-86	wet	medium
Antirrhinum (snapdragon)	10-15/50-59	low	medium
Calceolaria	10-15/50-59	moist	shaded
Birdsnest fern	20-30/68-86	wet	medium
Dianthus	11-15/52-59	moist	full sun
Euphorbia	17-25/62.5-77	low	medium
Fuchsia	15-20/59-68	moist	shaded
Gloxinia	18-23/64.5-73.5	moist	shaded
Hydrangea	17-20/62.5-77	moist	medium
Lilium	16-20/61-68	dry-moist	full sun
Pelargonium	18-25/64.5-77	dry-moist	full sun
Primula	10-13/50-55.5	dry-moist	shaded
Rose	14-20/57-68	dry-moist	full sun
Aspidistra	18-23/64.5-73.5	moist	low-medium
Bromeliads	15-20/59-68	low	medium-full
Cacti	18-23/64.5-73.5	low	full sun
Calathea	21-25/70-77	dry-moist	shaded
Coleus	15-18/59-64.5	low	full sun
Cyclamen	15-20/59-68	dry-moist	full sun
Dieffenbachia	21-25/70-77	dry-moist	medium
Dracaena	21-25/70-77	dry-moist	medium
Ficus	25-30/77-86	moist	medium
Howea	21-25/70-77	moist	medium
Ivy	18-23/64.5-73.5	moist	medium
Maranta (prayer plant)	21-25/70-77	dry-moist	low
Monstera deliciosa	21-25/70-77	dry-moist	medium
Parlour palm	21-25/70-77	moist	shaded
Peperomia	18-23/64.5-73.5	dry-moist	shaded
Philodendron	21-25/70-77	dry-moist	medium
Sanseveria (tongue plant)	18-23/64.5-73.5	low	medium-full
Snake vine	21-25/70-77	dry-moist	low-medium
Wandering Jew	21-25/70-77	moist	medium-full

PENPALS

I am 23 years old. I like writing, photography, reading and sports like table tennis, volley, lawn tennis and badminton. I would like penpals from anywhere in the world.

Lord L.K. Dartey, A312 Legon Hall, University of Ghana, LEGON GHANA.

Hi, my name is Jean Holmes. I'm a sixteen year old student who would enjoy corresponding with people of a similar age. All letters will be answered. I am interested in sports, namely tennis and hockey, reading and writing and most types of music. I would especially like to hear from people outside the South Pacific but I'm not fussy.

Jean Holmes, R.D.1, Upper Moutere, NELSON NZ.

Hi, my name is Lisa Foster, I have a horse and a dog. I like 'Neighbours' (especially Kylie Minogue and Jason Donovan), Bonjovi, Europe, Crowded House and Ice House.

97 Walker St, HELENSBURGH 2508.

Hi, does anyone want to write to a spunky, blue-eyed, blond 6'2" hunk? OK now I've got your attention, I like Bruce Springsteen, Dire Straits, country music, Get Smart, war movies, reading, riding my bike and camping. I don't care who writes as long as it's not just girls! Between 13-17 please 'cause I'm 16.

David Evans, RMB 9445, Meanwood Rd, TORBAY 6332.

G'day, my name is Hayley. I'm 11 years old and am looking for penpals any age between 10 and 13. I will write to girls or boys. I like to play netball, and I love to listen to pop music.

40 Benwerrin Dr, EAST BURWOOD 3151.

My name is Rachal Ballen and I'm looking for a penfriend around nine. My hobbies are story writing, stamp collecting, gym and rowing. I will answer all letters from boys or girls.

36 Brigalow St, O'CONNOR 2601.

20-30/68-86	wet	medium
10-15/50-59	low	medium
10-15/50-59	moist	shaded
20-30/68-86	wet	medium
11-15/52-59	moist	full sun
17-25/62.5-77	low	medium
15-20/59-68	moist	shaded
18-23/64.5-73.5	moist	shaded
17-20/62.5-77	moist	medium
16-20/61-68	dry-moist	full sun
18-25/64.5-77	dry-moist	full sun
10-13/50-55.5	dry-moist	shaded
14-20/57-68	dry-moist	full sun
18-23/64.5-73.5	moist	low-medium
15-20/59-68	low	medium-full
18-23/64.5-73.5	low	full sun
21-25/70-77	dry-moist	shaded
15-18/59-64.5	low	full sun
15-20/59-68	dry-moist	full sun
21-25/70-77	dry-moist	medium
21-25/70-77	dry-moist	medium
25-30/77-86	moist	medium
21-25/70-77	moist	medium
18-23/64.5-73.5	moist	medium
21-25/70-77	dry-moist	low
21-25/70-77	dry-moist	medium
21-25/70-77	moist	shaded
18-23/64.5-73.5	dry-moist	shaded
21-25/70-77	dry-moist	medium
18-23/64.5-73.5	low	medium-full
21-25/70-77	dry-moist	low-medium
21-25/70-77	moist	medium-full

Hi, my name is Catherine Petryk, I'm 14 years old and I would like to hear from anyone. My hobbies are roller skating, water skiing, netball, basketball, going to discos and going to the beach. I will answer all letters.

8 Fairlands Rd, MEDOWIE 2301.

Hi. My name is Lourdes Abanid and I am 30 years old and single. Hobbies are strumming guitar, cooking, sewing, gardening, watching TV, listening to music from 1950's and 60's. I would like to have a male penfriend aged 35 or above.

45-2 Mabini St, CEBU CITY, PHILIPPINES.

Hi! My name is Glenda Thompson and I'm 10. I would like a penpal 7 to 14, male or female. I like collecting stamps, stickers and erasers — I also like Minnie Mouse!

4/93 Pittwater Rd, GLADESVILLE 2111.

I am a 23 year old student and my hobbies are music, basket ball, football and dancing. I would like to correspond with gents and ladies from anywhere.

Melb Moore Danso, PO Box 8137, TEMA GHANA, WEST AFRICA.

My name is Christian Etsey, I am aged 25 years and my hobbies are football, reading, travelling and sports. I would really like an Australian penfriend.

PO Box 340, TEMA, GHANA, WEST AFRICA.

Are there any ladies who would like to write to me? My name is Frank, I'm a 29 year old Capricorn. My hobbies are gardening, camping, fixing cars, reading and self-sufficiency. All letters will be answered.

14 King St, BALLARAT 3350.

Hi, My name is Anne-Marie Faulkner, I am 15 years old and live in NSW on a property. I am looking for penpals aged between 16 and 21, male preferably, anywhere but NSW. My hobbies include listening to music, reading good books and playing most sports.

Linton, BARRABA 2347.

Concrete Placing, Compaction and Curing on the Farm

by the Cement and Concrete Association of Australia.

This is the third in a series on materials, mixing and placing concrete for farming projects. The others cover materials and mixes for concrete on the farm (GR 64) and batching and mixing concrete on the farm (GR 65).

PLACING

Once the appropriate materials and proportions have been selected, and the concrete mixed to the desired workability, it should be transferred to the job and placed in the forms with a minimum of delay within, say, half an hour of the time of adding water to the mixer.

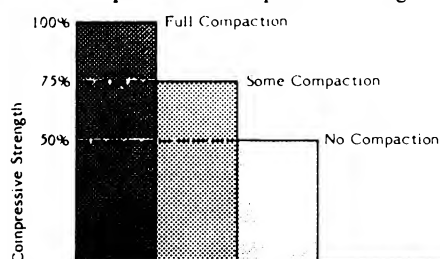
Placing should always commence at the lowest section of the work. This is particularly important for paving which is on a slope. By using this principle, succeeding batches of concrete can be worked into the previously placed batch to achieve a homogeneous mass, free from planes of weakness or leakage paths. Succeeding batches must be placed before the concrete begins to harden. Placing may require pre-planning so that the face of the concrete remains workable. This is particularly important during hot weather and when the placing rate is slow.

When placing concrete in deep walls which contain reinforcing steel, it is desirable to prevent the concrete falling through the reinforcement. If this happens, segregation of the concrete can result, with 'honeycombed' concrete forming at the bottom of the wall. By using a large diameter flexible pipe or even a chute arrangement, this problem of segregation can be reduced. A good rule to follow is to place the concrete as close as possible to its final position.

COMPACTION

When first placed in the form concrete will contain a high proportion of trapped air pockets. These form leakage paths and seriously reduce the potential strength of the concrete. They are moved by proper compaction, which is therefore essential to obtain the full potential strength of the concrete (see figure 1). Rodding the concrete with a steel bar, or with a piece of 75 x 35 mm (3½ x 1½ in) timber, although time consuming, is a simple method of achieving adequate compaction on small jobs.

Fig. 1. Effect of compaction on compressive strength.



Full compaction is best achieved by using a mechanical poker vibrator, which can be obtained from machinery/equipment hire firms. Poker (or internal) vibrators should not be run when the vibrating head is not immersed in concrete, as

this will lead to burning out of bearings. For efficient use the following should be observed:

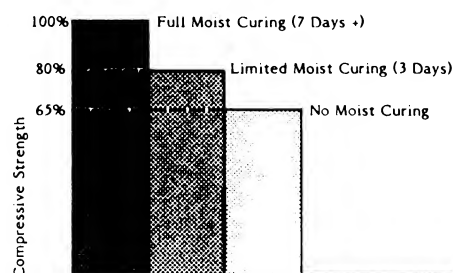
- They should be used in a vertical or near-vertical position.
- The underlying concrete layer should be penetrated.
- Insertions should be close enough so that zones of influence overlap (about 500 mm/20 in).
- The vibrator should remain in the concrete until no more air bubbles appear on the surface.

For large floor areas a vibrating screed should be employed, using a poker vibrator to compact concrete at the edges of the slab. Should a vibrating screed not be available, adequate compaction can be achieved by using a solid screed board in a tamping fashion prior to actual screeding. In this case a robust board is required, e.g. 200 x 35 mm (8 x 1½ in).

CURING

The final step in making good concrete is to ensure that the concrete is not allowed to dry out too rapidly. Early loss of water from the concrete, of especial concern in hot dry conditions, can lead to unsightly cracking, and a significant reduction in strength. Water must be available at all times to chemically react with the cement. Premature drying out not only weakens the concrete, but makes it less watertight and wear-resistant. The effect of the curing on concrete strength is shown in figure 4. The curing should be commenced as soon as it can be accepted without causing damage, and then kept in position for as long as possible. A minimum period of 7 days is recommended.

Fig. 2. Effect of curing on concrete strength.



Curing methods which may be adopted are as follows:

Full Moist Curing

Most suitable for floor slabs, this method can be achieved by covering the slab with sand, which is kept moist for the entire curing period. Covering with hessian or bags, kept continually moist, is another useful way of curing slabs, and can also be used on vertical surfaces, such as walls and columns. Leaving vertical formwork in position for a few days is another way of extending the curing period.

Covering with Vapour-proof Membrane

Materials such as building paper or polythene sheets are a convenient way to cure concrete especially when water supplies may be limited. The sheeting prevents water in the concrete from evaporating and keeps it in a moist condition

over the curing period. It is very important to hold the membrane in close contact with the concrete surface using sand or timber. Winds should not be allowed to blow under the membrane, otherwise curing efficiency will be lost. This method can be used for horizontal and vertical surfaces.

Chemical Curing Compounds

When sprayed onto the concrete surface at the manufacturer's recommended dosage rate, the compound retards the evaporation of water from the surface, similar to covering with a vapour-proof membrane as described above. Generally, the most effective compounds are chlorinated rubber or wax based.

Because they can interfere with the bond between the concrete and subsequent surface treatments such as paint, toppings or render, there can be limitations on their use, but they do provide a convenient method for curing both horizontal and vertical surfaces.

The better and longer the curing methods, the more chance the concrete has of achieving its potential strength, which means improved wear resistance and general durability.

Information courtesy of the Cement and Concrete Association of Australia, 60 Albert Rd, South Melbourne 3205, a non-profit organisation sponsored by the cement industry to provide information on the many uses of cement and concrete.

Encounters with Tanks

by Tony Lou, Birchgrove, NSW.

I don't mean the warlike variety, but the simple kind that holds water. For what they do and considering their lifespan, water tanks are not expensive. But the initial outlay for a new tank can still be considerable, especially if your means are modest or if you have earmarked your funds towards other priorities (hand tools, tractor, wire netting, etc). Often people will discard a tank that has rusted through in one or two places, whereas most of the tank may be in fair condition.

We were in need of a tank one time and found a 500 gallon one that had been discarded. After a long hard look at its condition we rolled it onto the trailer and took it home. We were up around Coonabarabran, in the middle of summer and it is rather warm then, although by and large it is a nice dry heat and quite bearable.

The tank was minus its top but the floor was OK and the rust holes were all around the bottom rim. We could have snipped off the bottom three or four corrugations and soldered a new bottom on, and on reflection that would have been the quickest and simplest fix. Still, the tank had a few years on it so we decided to concrete line it.

Like I said, it was the middle of summer.

We bought a sheet of square welded mesh, about \$55 at the time and we used about 40 percent of the sheet. We had some chicken wire lying about and we used that as well. We also had to fit new taps and outlets to the tank and these items were (and still are) quite expensive. If you ever see these fittings at a market or a farm clearance sale, going cheap, then grab them as they always come in handy. We measured the mesh, then cut and rolled it and fitted it into the tank. It pays to spend the time to achieve a nice neat fit inside the tank as the mesh needs to be plastered over and it all relates to how much concrete you need to mix to do the job.

Middle of summer, right?

We used up whatever chicken mesh we had to reinforce the openings for the tank fittings, wired everything together, nice and neat, then heaved the little tank up onto its stand. It had all been so easy so far.

Phil had one of those little electric-powered concrete mixers, a very neat design, quite light and easy to move around. And if all you wanted to do was look at it and move it

around, then it was terrific. For mixing concrete, useless! So we used a wheelbarrow, traditional. How that word rolls off the tongue! But after 10 barrow loads the only thing that rolled off our tongues was perspiration.

Phil did the plastering, the tank was after all for his use, all we did was mix and heave the buckets of concrete. For such a small tank it was surprising how much 'mud' it took to plaster the inside. I don't know how Phil stood it inside the tank. Several times he asked if we wanted to try our hand at plastering, but we told him what a great job he was doing and besides he was almost finished.

Well, it was kind of a tough half day and in the country there are plenty of tough full days so half a day is neither here nor there and you don't count the hours, not like in the city, and in the end we did save several hundred dollars that needed to be saved. Regardless of its humble origins the tank held water and in all probability would outlast a new steel tank, and that was the main thing.

I must confess that I find a considerable satisfaction in reconstructing, utilising or refurbishing something discarded. It doesn't require great strength or great intellect, just a little organisation and common sense, and if you have some mates you get along with and can have a laugh with, well, then it's just a piece of cake.

CRYPTIC GRASSWORD

Continued from page 53

H	I	V	E		S		Q		R	O	O	M
I		I		S	T	R	U	T		N		E
T	I	C	K		U		I		G	U	M	S
S		E		E	M	B	E	R		S		S
	B		T		P	A	T		L		P	
W	A	G	E	R		N		T	O	T	A	L
	T		R	A	P		D	R	Y		W	
T	O	A	S	T		C		Y	A	W	N	S
	N		E		J	O	B		L		S	
O		F		D	O	Y	E	N		L		L
D	I	A	L		I		A		P	I	N	E
E		L		G	N	O	M	E		K		A
S	O	L	E		T		S		S	E	L	F

Success depends on where intention is.

Gita Bellin

MORE PRUNING TIPS

The art of pruning develops from an understanding of how trees or vines grow, the habits of different varieties, and from learning by actually doing the job yourself. No two pruners are the same, but they all know some basic principles.

EQUIPMENT

Success of pruning relies to a large extent on the pruner being equipped with the correct equipment that is properly maintained:

- Hand secateurs — select a lightweight robust type, with provision for replacing blades and with comfort-contoured plastic covered handles for the hands.
- Sharpening stone — should be used frequently to keep secateurs sharp. Frequent sharpening prevents build up of rust, dust or plant sap and removes any chips or nicks on the blades. A clean sharp blade does not stick and pruning cuts are fast, easy and clean. Oiling the secateurs is advisable where no self-lubricating parts are provided.
- Pruning saws — for removing branches thicker than 25 mm (1 in). Select a strong blade saw with a good thickness of steel. A saw with 9 teeth per 25 mm (1 in) and a 40 cm (16 in) long blade is suitable for most pruning jobs. Special tools are necessary for sharpening saws — seek advice from your hardware supplier.
- Lopping shears — ones with long handles have added leverage and this provides greater cutting strength. You can also reach further with the longer handles.
- Sealant — can be used for sealing and covering cuts greater than 25 mm (1 in) in diameter. It prevents wounds drying out or becoming infected with wood-rotting fungi. The sealant should dissolve in sap and for this reason some paints and the more popular black bituminous products are used. If heavy sap bleeding takes place after cutting, wait until sap flows stop, then apply sealant.
- Budding knife — may be useful for summer pruning jobs when growth can be topped (younger, softer parts of shoots are removed).

TIMING

This is usually winter when leaves have fallen and you can see what you are doing. Early winter pruning encourages early bud break in spring. Delaying pruning to just before bud break delays spring shoot growth. Cherries are a special case. Prune young trees in spring, at flowering. For older trees, prune at harvest or late summer, never in winter.

BASIC PRINCIPLES

The aim of pruning is to regulate the balance between fruit growth and vegetative or wood growth and to allow light and air into the trees. Pruning also dictates the form and framework of trees and vines, so prune trees or vines according to vigour, i.e. the average length of shoots produced by a given pruning treatment, rather than growth, the total weight or length of shoots produced.

● Pruning promotes quality of wood growth but decreases the quantity. Hard pruning produces vigorous growth but eventually a tree's overall vigour suffers. It will stunt young

trees, but does not affect older trees as much. To develop a strong form and framework quickly, prune as lightly as possible each year.

- Hard pruning encourages strong shoots and vegetative growth. Light pruning encourages the production of more flower buds and fruit from a young tree. Remember, however, in non-irrigated areas trees or vines not being irrigated must be pruned hard to lighten the burden of fruit on the tree. Don't grow trees or vines without irrigation or good rainfall.
- The strongest growth on any shoot develops from the terminal bud, so limbs grow and thicken quicker if you leave them uncut. Continual hard pruning of the leader will weaken the limb. Apricots are an exception as the terminal bud is weak. To encourage an apricot to develop cut back to a healthy bud below the leader terminal bud. Once a tree is developed always leave the shoot uncut or cut back to a weak lateral. The more severely you prune an apricot tree, the quicker it grows.
- A wide angle between limb and trunk is naturally stronger.
- Horizontal growth produces less vigorous growth and becomes more fruitful earlier compared with upward growing vigorous shoots. Sap flows most strongly to the highest parts of trees or extremities of vine arms and so the most vigorous growth occurs there.
- All trees have a natural habit or form into which they grow and the pruner's job is made easier if the tree is trained accordingly. The central leader suits pome fruit, for example.
- On windblown trees, leave bent limbs intact for a few years. Encourage as much growth as possible towards the windward aspect. Cut back limbs on the sheltered side or lower level rather than on the exposed side. After a few years, when the exposed side has strengthened and is less likely to yield to wind, prune to develop the desired framework. If this is a vase shape tree, for example, prune leaders to develop the hourglass shape. In any event trees should be protected in windy locations by windbreaks.
- Weak trees make pruning a harder challenge. Remember to provide water and nutrition, check for pests or diseases and always select the best tree or vine and variety for your area.
- When removing large limbs never leave a stub. Cut back flush to another branch or trunk. Cover large cuts with a sealing material. Pruning also compensates for shock of removal from a nursery and replanting in your garden, and corrects or repairs damaged limbs.

Information supplied by the Department of Agriculture NSW.

Previous pruning articles in GR have covered:

Basic Procedures — GR 61, pp. 63-4.

Pruning Pelargoniums — GR 51, p. 23.

For a detailed list of discounted second-hand books on all aspects of gardening — growing fruit, vegetables or flowers send a large SAE to 'Heather', PO Box 764, Shepparton 3630.

PRUNING — MY WAY

by Ray Hart, Subiaco, WA.

Everyone can deal intuitively with fertilising, watering and pest control, but not with pruning. This has come about because of the extraordinarily complicated systems developed in the past. I think more nonsense has been written about pruning than any other subject in horticulture.

Once I was discussing pruning with a very good permaculturalist, and after about half an hour's mucking around with one small tree we thought we had it about right, with all the buds and shoots just where they should be. Then an old non-permacultural ex-professional pruner came along. So we moved to the next tree, handed him the pruners, and asked him to show us how it was done. He looked at the tree for a few seconds and in 30 seconds it was all over. There was no mucking around with the finer points — he just whipped off all the right bits. Now I emulate his style.

There are only two basic factors. You are pruning to get more of the right fruit, and to get the tree into the shape that is convenient. More specifically I prune with the following ideas in mind (see figure 1 as well):

- Prune to keep the tree at a size and shape that is convenient for picking, pest control, shade, aesthetics or whatever factors are important to you.
- Prune to keep the growth down, as excessively large trees need more water and fertiliser.
- Prune to keep the fruit low down or at least not too high, unless you like climbing ladders.
- Mercilessly prune to get rid of errors (dead wood, crossed branches, previous pruning mistakes or diseased limbs).
- Prune to keep the density of foliage and fruit even and just right to let in light. This means avoiding having all the foliage at the top and therefore no growth on the bottom shoots — otherwise the tree will just get taller every year.
- Prune to force the growth into fruit rather than branches, unless you want the tree to grow.

Other important considerations are:

- Don't restrict yourself to pruning branches. If there is an excessive fruit set, then prune off lots. It is better to have 200 large fruit than 500 little ones.
- Don't regard pruning as primarily a winter activity. I prune mostly in the summer. In winter it is nice to do a bit of touching up when you can see all the branches, and that's the

time for really major surgery like setting up a whole new branch.

- Don't make large cuts unless you want new shoots. If you make big cuts, you get big new shoots. This is a major advantage of summer pruning. Remember to cut off enough of the new shoots, or you will get too many (see figure 2).

- Don't delay with young trees. Buy only trees with the shape you want, and make sure they stay that way. With young trees this means regular and careful pruning. Bending is equally important, i.e. bend branches to where you want them. I use bricks tied with loops of baling string, and as many as are necessary. Four on a young tree is quite normal. This is particularly useful in spreading branches in nursery stock which has been crowded and grown straight up. A bit of judicious bending will form a good shape for the future.

- Don't read books about complicated formal pruning styles unless you happen to like that sort of thing.

The other side to pruning is to think in terms of pruning off whole trees. This has its basis in modern commercial intensive plantings (such as trellises). The idea is that you plant at extremely high densities and get a high yield per area in the first years when the trees are small. After a while you can prune back severely or even prune out whole trees. This is particularly useful if you put in several different varieties, because you can eliminate any trees that don't do well or if you don't like a particular variety for some reason. When you are getting started, the idea of killing a tree sounds like murder, but once you get 500 plums from each of 4 varieties it begins to look like desirable euthanasia!

Finally, a few specifics and practicalities: if you are spending more than a few minutes on a small tree at one time, then you are doing too much. Most of the few minutes should be spent looking at the tree, followed by a burst of strategic cutting and shaping.

- Citrus and most evergreens (like the guava, avocado and custard apple) are pruned mostly for shape. This means chop off the top to keep the height down and chop off any branches that stick out sideways and get in the way.

- Peaches and nectarines fruit on last year's wood, so you have to thin out the laterals by cutting some off. This pushes growth into the remaining laterals and fruit, and promotes new laterals for next year. Prune the top and sides to keep the

Fig. 1. Tree Shape

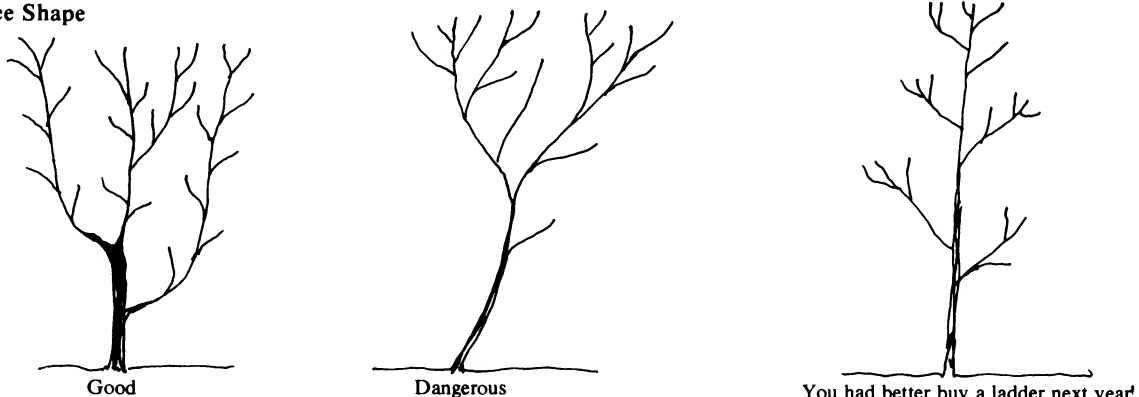


Fig. 2. Single Branches



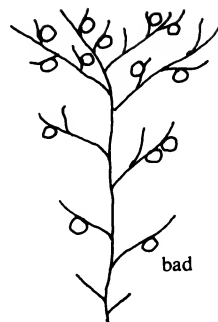
A major branch, pruned in spring.



Now is the time for decisive action



Remove most of the top shoots, force the growth down. Look at the fruit!



Do nothing, and it will get worse next year.

height and shape right. Keep the number of fruit down by reducing the number per cluster as well as the number of clusters. For example, you could reduce all multiples to singles and remove half the singles in a good year.

- Apricots fruit on wood a few years old, so pruning is really only for shape. Apricot trees get very large and hard to pick, so try to keep them down. Then thin the crop without hesitation if the tree is bearing heavily.

- Plums fruit on those little laterals along the branches so you prune the tops of the branches to force the growth into these laterals and the fruit. Fruit thinning is often required, and try to let the tree grow in size only a bit each year.

- Grapevines are quite different. Initially, prune to set up wood as a skeleton on the trellis. After that, pruning is very

simple: for every two annual shoots, remove one completely and leave two buds on the other. A few varieties are different (including sultanas) and will not fruit if pruned this way. Consult a book for these.

- Figs and mulberries don't really need to be pruned, so you just keep the size down. They are very forgiving and can be pruned into almost any convenient shape.

Above all, don't get too obsessed with pruning — most trees fruit pretty well anyway!

Reprinted from the newsletter of the Permaculture Association of WA, PO Box 430, Subiaco, 6008. Vol. VIII, No. 2, May 1986. \$12 p.a. membership. Ray is the convener of PAWA and specialises in urban intensive food growing systems.

STURDY WOODEN TOYS TO DELIGHT YOUNG CHILDREN HANDMADE FROM A VARIETY OF LOCAL AUSTRALIAN NATIVE TIMBERS

Only dead or fallen trees are used, no healthy living trees are cut for these toys

Car \$5.25



Steamroller \$10.00



Fire Engine \$9.25

Helicopter \$8.50



Truck \$6.75



Train \$10.95



Iron \$4.50

Bath Boat (usu. Red Cedar) \$5.50

Length of toys between 100mm & 200mm

All items are oil finished, so can be easily & quickly refurbished

Prices include Postage & Handling

Please send Cheque, Bank Cheque or Money Order

to

COUNTRY TOYS
P.O. BOX 206 NIMBIN 2480

Trade Enquiries Welcome

NATIONAL ADOPTION CONTACT REGISTER

A National Adoption Contact Register has been established in Australia to enable people who were adopted and members of their birth family to be reunited.

Many adoption organisations throughout Australia have many names on their lists, and they are doing a marvellous job, but they cannot obtain a reunion until both parties have come forward. There are so many people listed on these registers just waiting for the other party to come forward. There are a large number of adoptees and natural parents who do not realise that the other party is wishing to reunite. What we as adoptees and natural parents must do is to let these people know that we are seeking to be reunited with them.

The facts that all adoptees and natural parents know for sure, and never forget, are the birth date and birth place. The aim of the National Adoption Contact Register is to nationally advertise these never forgotten dates so that both parties will, because it has something to do with them, read through the list. If a date is on the list that relates to them then I'm sure, because of a person's human inquisitive nature, they will seek to follow up the matter further. No one can ever forget this missing link in their life.

We are asking for all adoptees and natural parents to participate in this most important nationally advertised contact register. To have your birth date/or the birth date of the person you wish to reunite with on this register please write to: National Contact Register, PO Box 326, Maleny 4552. Ph: 071-944-538.

A Fresh Look at Crop Rotation

by Michel Porcher, Gisborne, Vic.

The idea of rotating crops is not new; it was known in biblical times and green manures were commonly used between crops in the middle ages. Everyone agrees that the purpose is to minimise the risk of infection (diseases, pests, weeds) and to regulate the uptake of nutrients by crops, thus taking maximum advantage of what is available in the soil and reducing the need for massive applications of compost/fertilisers. As side benefits, surface erosion is minimised because the soil remains covered most of the time, and leaching is reduced to a minimum because the deep rooted crops bring back to the surface some of the elements that would have been washed away during irrigation or with the rain.

HOW TO ROTATE CROPS

Understandably not everyone agrees on how to rotate crops. Apart from the fact that rotations have to be different according to the type of farm and the climatic conditions, the philosophy of the farmer or adviser will influence the way crops are used. On commercial farms for instance the primary objective is to maximise production and profit, second comes the control of pests, diseases and pathogens, last comes the environment. Taking maximum advantage of the equipment available, the natural resources such as water (not always available free of charge) type of soil, length of the local growing season, type of seeds available locally, financial returns of various crops and the difficulty of producing a particular crop are all factors that have to be considered by farmers when working out their rotations. On self-sufficient properties where usually the organic principles are adopted, production and profit are the least of all worries, though the yields could be substantial, but what is sought is a system of production in harmony with the local environment and the laws of nature. This does not mean going back in time but on the contrary using past experiences and all available scientific knowledge to that effect. In Europe, America and Asia, good gardeners and farmers, organic and conventional alike, generally adopt a three to six step plan spanning three to six years (not necessarily one step per year).

Let us consider for instance a three plus one step plan; the 'plus one' being optional and giving some flexibility to the plan which could span over two to six years or more when perennials are used.

Step 1: a soil builder/restorer is grown, buckwheat for instance that will grow on poor soils or a legume such as tickbeans. Ideally these should be used as green manures. If they are even only partly harvested then the optional step should be inserted before step 2.

Step 2: a crop of heavy feeders is now grown. It will benefit from the organic matter and the nutrients recycled from the previous crop. Again opinions vary as to what is a heavy feeder. A sensible approach would be to consider a heavy feeder to be any crop that will give a heavy yield per hectare or any crop that will be taken out of the ground including the stubble. Any specific crop that will draw a specific element out of the soil in large proportions or a crop that will draw a

wide range of elements in moderate quantities can also be considered a heavy feeder. On those bases some heavy feeders are potatoes, maize, cauliflowers, sunflower, flax and so on. Lucerne, although a legume, therefore a nitrogen restorer, can be a heavy drain on other elements if it is harvested regularly as hay.

Step 3: a crop of deep rooted light or medium feeders then should follow the heavy feeders, the idea being to utilise the nutrients left unused by previous crops during steps 1 and 2 and to prevent them from being leached down further and lost to the sea. The catch is that not all light feeders are deep rooted. This is where mixed crops will be particularly useful. Also on occasions if a deep rooted crop cannot be grown it won't be too upsetting to the general plan, it will only mean that more nutrients will be lost by leaching. Another concession could be that a light feeder be grown instead of a heavy feeder, with the plan continuing as if a heavy feeder had been grown — the soil will only end up slightly richer.

Step 4 (optional): this can be a 'disease breaker' such as mustard, oats and so on (see table 1) and be inserted at any time during the plan, following any step, if a disease, a pest, a weed needs to be controlled before a decent crop can be produced. When selecting a disease breaker the previous crop and the following one will have to be considered as to the demand for nutrients on the soil. Adjustments to the fertilising programme can also be made to that effect.

Step 4 can also be a green manure. If made of legumes, it should preferably precede a heavy feeding, leafy crop. If not leguminous it could precede a legume crop. A same crop can be both a green manure and a pest, disease or weed breaker. (A cash crop can also be a disease, pest or weed breaker.)

The following example does not consider any mixed crop because it illustrates rotations only but even in such situations several varieties of the same crop can be grown together for the sake of diversity (disease resistance) as long as the aim is not to grow seeds for sowing.

Example One

Step 1 Clover

Sown in autumn 83 as a cover crop, protects against erosion during winter. Can be partially harvested or grazed or turned into compost in early spring. Provides nitrogen.

Step 2 Corn

Sown late spring 83, harvested later summer/autumn as a grain crop or as silage. As a heavy feeder it benefits from nitrogen fixing of previous crop.

Step 3 Oats

Sown in autumn 84 as a cover crop/fodder. Light feeder.

Step 1/4 Lucerne

Sown in spring 84 for hay. Will occupy the ground for two to four years. Will go deep down seeking nutrients and will fix nitrogen. If only partly harvested will restore plot for another heavy feeder.

Depending on soil conditions and a few other factors it may be necessary to apply some compost several times

during every step, especially prior to and during corn growing if it is grown for grain and during the four years on the lucerne hay stand. In fact nine times out of ten it will be beneficial in any case. Only if the soil was in perfect biological condition and if all the elements were available would the addition of compost be unnecessary. Let's not forget also that the application of organic matter (compost and manure) is basic food for the millions of micro-organisms and earthworms so

necessary to the perfectly balanced running of such systems.

In order to complete the rotation in spring 88 the lucerne could be followed by corn and oats again or buckwheat in spring/summer 88 followed by clover in summer/autumn/-winter, then corn, oats, lucerne again.

Part II next issue will present a more complicated rotation system and explain its operation and benefits.

Table 1 Crops to control diseases, pests and weeds.

Disease controller	Crop protected	Disease controlled	Diversity achieved*
gladioli	onion	white rot	in time
oats	beans	fusarium root rot	in time
onions	potato	Rhizoctonia caused	in time
pumpkin	cabbage (crucif.)	club root	in time
tomato	cabbage	club root	in time
ryegrass	cabbage	club root	in time
spinach	cabbage	club root	in time
garlic	strawberries	Botrytis rot	in space
garlic	roses	Oidium	in space
chives	roses	Oidium	in space
chives	currant	rust	in space
garlic	peach tree	curly leaf	in space
garlic	fruit trees	powdery mildew	in space
horseradish	cherry tree	fruit rot	in space
Pest controller	Crop protected	Pest controlled	Diversity achieved
barley	potato	nematodes	in time
barley	tomato	nematodes	in time
mustard (white)	many	wireworm	in space
mustard (white)	many	nematodes	in time
marigold (<i>Tagetes spp.</i>)	many	nematodes	in time/space
oats	potato	nematodes	in time
onions	beetroot	nematodes	in time
dahlia	other flowers	nematodes	in time/space
savory	beans	flies	in space
tomato	beans	flies	in space
carrot	leek	flies	in space
leek	carrot	flies	in space
nasturtiums	apple tree	woolly aphids	in space
tansy	many	cutworm	in space
basil	tomato	thrip	in space
basil (opal)	tomato	hornworm	in space
borage	tomato	hornworm	in space
Weed controller	Weed controlled		Diversity
buckwheat	many without stolons or rhizomes		in time
comfrey	blackberry		in space
Mexican marigold (<i>Tagetes minuta</i>)	couch grass		in time/space

*By diversifying we increase the overall resistance to pests and diseases. Companion planting gives us diversity in space and rotations diversity in time.

PEPPING UP PESTICIDES NATURALLY

Pure pyrethrum is an effective botanical insecticide, but when exposed to light and air it quickly degrades. Check insecticide labels and you'll find most pyrethrum products contain a synergist — an ingredient to enhance its potency and longevity. Most commonly used is piperonyl butoxide (BSI), a synthetic synergist now suspected of causing genetic mutations. But thanks to recent research, several natural synergists have been found to increase pyrethrum's effective-

ness, reports *The Avant Gardener*. For the extra punch of a synergist without using BSI, add 1 teaspoon of either nutmeg oil, parsley oil or sassafras oil (available at many health food stores) and ½ teaspoon of dishwashing liquid to a pint of pure pyrethrum spray.

Rodales Organic Growing, March '87. Reprinted from the *BOGG Newsletter*, June 1987, PO Box 236, Lutwyche 4030.

CHOKOS

by Anne Sands, Port Waikato, NZ.

I remember as a child peeling these prickly vegetables and my mum serving them up in white sauce. I could just manage to eat them served this way. Years later I was given some and served them with cheese sauce and made choko pickle — a definite improvement. I tried time and time again to grow one but they always failed: the insects got them or they just died. A couple of years ago I was again handed one in the growing state — a sprouting fruit. Remembering our love for choko pickle, I decided to give it another go. I have been surprised at how many of my friends like them and at the many different ways they use them.

CULTIVATION

Before planting (if you haven't already got one), remember that they can grow very rapidly over a large area if allowed. Try planting them so they will grow up trees, trellis, fences, hen house, old sheds or, as I have, up a steep hill. It is best to plant it at the foot of the hill with the roots shaded from the hottest sun. Dig a hole about 60-90 cm (2-3 ft) square and 60 cm (2 ft) deep. Incorporate half a bucket of wood ash with a few spadefuls of soil from the hen house and if the soil is heavy, add half a bucket of sand. If you don't have hens, any rotten manure will do. Plant the fruit so the shoot end is out of the ground. Make sure there is nothing around for snails to hide under and check regularly until the plant is growing well. Last year when we thought we were being invaded by snails, we would go out at night with a torch and bucket. The first couple of nights it was amazing the amount that we collected, as they were climbing up the concrete-block house and the water tank. Warning here!! I put a lid on them until morning and the kids set off to feed them to the hens. Before we knew it, the hens had had enough and there were snails crawling everywhere, including back out of the hen house through the netting. I find young children visiting love to go snail hunting with me, we feed some to the hens and set up a snail race with a few. Just draw a circle and place the snails in the centre. The first snail out of the circle is the winner. Pre-schoolers just love it!

Chokos belong to the cucurbit family and will only grow when conditions are warm enough, so don't try growing them too early in the season. Leave the tuber in the ground: it will die down in the winter and shoot away again in the summer for several years. One plant will produce 200 or more fruit.

RECIPES

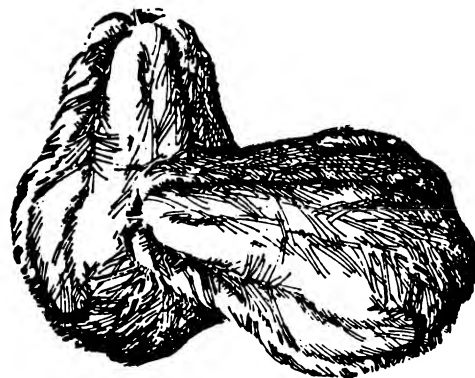
Following are some ideas for using your harvest.

Note: when soaking fruit overnight, make sure you use only plain salt. Never soak in metal containers and always cover with a cloth or lid.

Crunchy Chokos

- 500 g (1 lb) chokos
- 25 g (1 oz) butter
- ¼ cup breadcrumbs
- salt and pepper

Peel and halve chokos and cook in boiling water until



tender. Drain well and cut into cubes. Place in ovenproof dish. Melt butter in saucepan and add breadcrumbs, pepper and salt. Toss until mixed and sprinkle over chokos. Grill until golden brown.

Choko Pickle

- 4 medium chokos
- 3 medium onions
- 2 tbsp curry powder
- 1 tbsp mustard
- ½ tsp turmeric
- ½ cup water
- 4 cups water
- ¼ cup plain salt
- 2½ cups vinegar
- ¼ cup sugar
- ¼ cup flour

Peel, seed and dice chokos. Peel and slice onions. Mix 4 cups water and salt, pour over chokos and onions and soak overnight. In a large saucepan combine vinegar, sugar, curry powder, mustard and turmeric. Add well drained vegetables and bring to the boil. Simmer until tender, about 20 minutes. Mix flour and ½ cup water into paste and thicken pickle. Boil 5 minutes. Stir frequently. Pour into hot dry jars. For better keeping seal with wax as well as plastic covers. Makes about 6 cups.

Spicy Baked Chokos

- 2 chokos
- 25 g (1 oz) butter
- 1 onion
- 300 g (10 oz) mince
- ¼ cup soft breadcrumbs
- ¼ cup tomato sauce
- ¼ tsp tabasco
- pinch curry powder
- salt and black pepper
- 1 egg
- 4 tbsp grated parmesan cheese
- 2 tbsp chopped mint

Peel and cut chokos in half. Cook in boiling water for 25 minutes. Drain and allow to cool. Scoop out seeds and enough flesh to leave a 12 mm (½ in) thick shell. In a pan, melt butter and cook chopped onion till soft, add mince and cook until just brown. Stir in breadcrumbs, tomato sauce, tabasco, curry powder, salt, pepper and choko pulp. Add beaten egg

and remove from heat. Fill each choko shell in an oven-proof dish and sprinkle with cheese. Bake at 180°C (350°F) for 30 minutes and serve garnished with chopped mint.

Curried Chokos

- 2 chokos
- 1 onion
- 1 clove garlic
- ¼ tsp salt
- 25 g (1 oz) butter
- ½ tsp ground cumin
- ½ tsp ground coriander
- ¼ tsp turmeric
- 1 tsp mustard seeds
- 1 tbsp lemon juice
- ¼ cup raisins
- ½ cup chicken stock
- salt and freshly ground pepper
- boiled rice
- toasted sesame seeds

Peel and cut chokos into thin slices. Peel and chop onion. Crush garlic and mix with salt. Melt butter in a pan and cook onion, add garlic, cumin, coriander, turmeric and mustard seeds. Cook 2-3 minutes. Add choko, lemon juice, raisins, chicken stock, salt and pepper and cook gently 10-15 mins. Serve with rice and sprinkle with sesame seeds.

Choko Soup

- 2 chokos
- 1 onion
- 1 large potato
- 2 cups water
- pepper and salt
- 1 cup milk
- 1 tbsp butter
- grated cheese
- chopped parsley or fresh herbs of your choice

Peel and chop chokos, onion and potato into a saucepan. Boil in water and simmer until tender. Cool and mash or blend. Season with pepper and salt and add milk and butter. Reheat and simmer until thick. Serve with cheese and parsley sprinkled on top. I also use this method for pumpkin soup, but omit the cheese.

Choko Chutney

- 2 kg (4½ lb) chokos
- 2 tbsp plain salt
- 100 g (3½ oz) preserved ginger, chopped
- 50 g (2 oz) garlic, chopped
- 500 g (1 lb) raisins or dates, chopped
- ½ tsp cayenne pepper
- 600 ml (1 pt) malt vinegar
- 500 g (1 lb) brown sugar

Peel and chop chokos and put into large bowl. Sprinkle with salt and stand overnight. Put into large saucepan with ginger, garlic, raisins or dates, cayenne pepper and vinegar. Bring to boil and simmer until thick and soft. Stir in sugar until dissolved. Cook until consistency of jam. Pour into hot dry jars and seal when cool.

Choko and Lemon Jam

- 2 chokos
- 1 lemon
- ½ tsp salt
- ¾ cup water
- 1 ¾ cup sugar
- 2 tbsp chopped preserved ginger

Peel and grate or finely chop chokos and chop lemons. Place in bowl and sprinkle with salt. Leave overnight and drain off any liquid. Bring sugar and water to boil, stirring to make sure sugar is dissolved. Add chokos, lemon and ginger and boil 25-30 mins until a little tested in a saucer is set. Pour into hot, dry jars and seal when cold.



PESTICIDES ON FRUIT AND VEGETABLES



Any area devoted to a monoculture system, i.e. large numbers of one type of plant growing together, will attract a large number of pests. The general consumer demands perfect fruit, and these two facts force commercial fruit and vegetable growers to spray heavily with pesticides. It is not possible to say which fruits or vegetables receive most pesticides as it depends on the degree of the pest problem each year, and how far the produce has to travel before reaching the shops.

All fruit and vegetables that are eaten with the skins intact should be washed with water and an organic detergent or pure soap. One organic detergent you may wish to try, as it does claim to remove pesticides, is Nutri-Clean which is produced by Nutri-Metics. It is only available through an agent; if you're not sure who to contact in your area you can phone 02-818-9011 to find out the name of your local agent.

Unfortunately the majority of pesticides used today are absorbed into the plant at an early stage so it is not possible to wash off the chemicals, but most fungicides lie on the surface of the plant and can be washed off. As most of the mineral and vitamin content lies just under the skin of the plant it is desirable not to lose that nutrition by peeling or skinning your fruit and vegetables, so if you would like to use the goodness in your food, try an organic cleaner to wipe off any excess chemicals.

PRESERVING JUST A LITTLE FRUIT

When you've only got a small amount of surplus fruit on hand it's hardly worthwhile getting out the preserving pan for a bottle or two, you can preserve the fruit quite successfully the way they used to do it in the real 'good old days'. Prepare and bring the fruit to boil in a saucepan, sweeten and cook as long as required. Fit rubber rings into clean jars, preheat in a slow oven and fill the bottles to overflowing with the still boiling fruit. Cover and clip down immediately. This also works with jars that have plastic or rubber lined lids such as peanut paste or vegemite jars. The secret of success is to have the fruit boiling, fill to over-flowing and cover immediately. Good bottling!

For those who can't tolerate sugar or honey as a sweetener: a handful of sultanas (or raisins, currants) cooked with fruit will sweeten it sufficiently for most tastes.

Down home on the farm..

by David Miller.



Here we are sitting watching the first decent rain for 1988, and it is really lovely. Those friendly grey clouds are sweeping low overhead bringing nature's instant cure for dust. Dust? This seems like the worst year for talcum topsoil for a long time. Since Christmas, there has been a fine dirt film on everything, and farmers ploughing paddocks for the next crop could only be pitied — they work in a dust cloud all day long. With the temperature over 40 deg C so often, the ground has quickly baked hard, and anything moving on it has broken the crust into a fine powder.

Recently I returned from town to be confronted by a miniature tornado rising in a funnel two kilometres or more into the sky. It seemed to curve majestically as it whirled the dust higher and higher, then slowly moved across a distant paddock, hardly changing shape. It was not until I turned into our gateway that I realised this 'twister' was only two paddocks from home. God only knows where all that precious humus would be dumped, and what these farming practices cost all of us, not to mention the constantly deepening layer of brown over everything both indoors and out.

But now the autumn break has brought a drop in temperature, given everything a good wash, and we are all making plans for spring. Shrubs will soon be shooting again as if they had just returned from a holiday full of renewed vigour. Tiny shafts of grass will soon start to poke through the soil like small needles commencing a new patchwork in unison, and nature will quickly spread its green carpet over the land, reminding all of the link between the soil, plants and the earth's inhabitants.

The poultry will be glad of the new green pick. They have been labouring to find food among the dry grass for weeks, and we have had to feed them well because of the larger numbers and the bareness of the paddock. Despite the larger numbers, it is a pleasure to rear strong healthy birds, and a relief to see them go off to start new productive lives at someone else's place! What really fascinates me are the differences in rearing the various breeds from year to year. Some years, one variety of turkey or a different breed of fowl will produce more stock than the others, or the young birds will develop better than they did in previous years. This year, the Bronze and Bourbon Red turkeys are tops, while the Slate and Royal Palm varieties did not do well at all. While this may be due to poor management at times, it simply does not account for the stark difference in numbers. The chooks are the same. Some breeds have performed satisfactorily, while others are low in numbers and inferior in quality. There was crowding in some of the sheds this year, too, which has provided an opportunity to see how the different breeds perform under pressure. The Australorps certainly do not do

well in a crowded environment, especially when there are a few Indian Game cockerels in the group. These nuggety characters usually win in a fight, so we now keep them in a group on their own.

Free-range Guinea fowl can be quite aggressive with other poultry when food is scarce, but the growing keets are most tractable when kept in their own group. Younger birds can even be added to the group as they come off-heat, a situation most breeds of poultry will not tolerate. Chooks will often viciously attack young stock if they are placed in the same pen, and it is usually impossible to mix old birds together because their social order is disrupted and they will fight to maintain it. Turkeys are possibly the only other species, apart from waterfowl, which accept younger stock.

While speaking of aggressive birds, there is a group of young renegades that hang out near the back door at the moment. They are young Guineas and Indian Games that Megg has reared by hand, and look and behave like a group of young thugs. They are very angry about a highly privileged group in the immediate vicinity — the kittens. Now it is true the kittens get the best of food and attention, have the run of the place, and get choice feed throughout the day. This social injustice has incited the renegades who burst into the cat shed, push through the cats, and eagerly devour the classy fodder. The quick darting peck of the Guineas backed up by the strong push of the stocky Indian Games is more than a match for the kittens who hastily retreat up to the stacks of boxes to look down on the wholesale destruction of their meal. When the renegades finish, they emerge smacking their lips and rubbing their bellies secure in the moral righteousness of their victory.

It has been difficult keeping up with work at home and on the farm as well. Farming from a distance is really impossible unless one has plenty of spare time, and we long for the day when we are living on our own land and do not have an hour's drive before we start work. At present we are feeding stock and getting them ready for sale. This will lower the stocking rate and allow the pastures time to recover during autumn, so there will be good growth in spring. It is also time to attack the bracken again. This plant is in need of constant slashing to curtail its growth, so we must keep up the pressure.

The challenge of part-time farming involves the selection of stock that requires a minimum of management. The Scottish Highland cattle we have are excellent in this regard, and a breed called Salers, quite new to Australia, also fit this requirement well. Salers are used to mountain country, and we became interested in them because our Dairy Shorthorns always lose condition in winter and take a lot of care and feed to get them through the cold rainy weather. They are not suited to the climate on our property, so we decided we had to

have a hardier breed to replace them. Salers cattle roam the snowy, mountainous regions in central France, and have been herded nomadically and milked in the fields for centuries. They are built to walk long distances in search of feed, milk well, calve easily and have a modern lean carcase. They even have twins, and in the latest survey of French herds, one breeder with 80 cows had 89 calves — nine sets of twins!

The main advantage of Salers, however, is their ease of calving. No matter what the size of the Salers bull, all calves are of average size and, after birth, grow quickly. This means the breed can be used in crossbreeding programs to produce lean beef by increasing the size of the cattle, without introducing calving difficulties. The crossbred Salers heifers from this program may be retained, too, because they milk well and are keen foragers. We have two Salers heifers that will be used as the basis of a breeding program over the next few years. With these we will slowly build a stud herd.

One afternoon lately it occurred to me that Feathers, our red heeler, had not been to the farm much and would appreciate an extra run. As warm sun shone on her kennel through the trees I approached the gate. Usually she is there ready to welcome anyone passing by, but this time she was nowhere to be seen. I quietly entered the run and saw her head on the ground poking out from the kennel doorway. For a moment I could not see her breathing, so I quietly stepped closer and one eye opened. I froze as both eyes gazed quizzically at me. I was motionless, staring back, saying nothing. Then her mouth curled into a snarl and she rose to rip the kneecaps off this intruder. I must admit I was quite

frightened, realising she had not recognised me and was quite prepared to protect her domain. It was now my turn to be surprised, dismayed, scared, and at last I spoke to protect myself only to see her grovel at my feet wallowing in guilt. No wonder we love dogs so much, it is difficult to get your friends to be that effusive.

Life here has been enriched lately by a little bundle from the stork — another baby possum. One of the neighbours found it in the middle of the road and placed the marsupial in a hollow log, only to find it still there some hours later, cold and shivering. So home it went, and quickly landed at our place. This little fellow is a ringtail possum, much smaller than the brushtail we had a few years ago. Ping, as we have called it, settled in rather quickly and now runs around the bedroom at night climbing up the curtains and scurrying around the bed. At first this was great fun, but with deadlines to meet, and birds to feed early in the morning, the gloss has worn off rather quickly. We will have to curtail Ping's energetic behaviour a little to survive, so a large fridge box is being called into service to provide a separate bedroom so we have ours in peace. Ping spends most of the time observing the room from the curtain rod, but disappeared the other night, only to be found down the end of the pillowslip. Megg is away for the day, today, and Ping has disappeared again, so I suppose a tiny mouselike face and thin whiskers will poke out from somewhere in the room tonight as we get ready for bed.

Sunshine was home last weekend and we enjoyed hearing her latest stories from boarding school. This year a major building program has been completed and there are more boarders, many from overseas, so Suni is living in quite a cosmopolitan society. This is a real thrill for her, and the term is filled with lots of fun in-between study. When she comes home for the weekend, we have learned to adjust to a person who needs plenty of rest, as if she has been on a heavy concert tour, and needs a break in between performances. Sunshine seems to need this rest to make the transition from boarding school to home. After it, she becomes part of the family again, but unfortunately by the time she adjusts to home, she has to start preparing for her return to school again. It must seem to her that she has no weekend at all, by the time she has unwound, it is time to wind up again. It has taken all of us some time to understand this, and many hours of family discussion were spent before we worked out how to organise the weekends satisfactorily. It is probably harder for a younger person in our environment, because there is very little structure. If something has to be done, we usually work at it until it is finished — issues of *Grass Roots* are a prime example. We will work night and day if we think it is necessary, so the strength in our family is in the informality rather than the security of a predictable organisation. But I think kids would prefer security, so we have a family discussion each time Sunshine is home so we all know what is happening during the weekend, and no-one is disappointed.

Another person battling with the adjustment to a new lifestyle is Jack, Megg's father, who is gently finding his way without a partner. Jack and Doris had many interests in common, and would spend time each day discussing their different projects. Now when something new happens followed by the thought of telling Doris about it, there is the obvious



EXCLUSIVE KIT HOMES

Our rock solid mud brick homes are available in kit form or built to registered lock-up stage or completion.

They feature concrete slab or paved floors, 10" thick walls, fully insulated vaulted cathedral ceilings and optional upstairs lofts.

Sizes range from 8.9 square cottages to 17.4 square homesteads and prices are as low as \$15,650.



**post & beam
constructions**

PO BOX 280, HASTINGS, 3915. PHONE (059) 82 1488

Please send details about your mud brick home kits.

Name

Address

Postcode

gr

and sad realisation that she is not there anymore. But Jack says he tells her anyway! Allowing grief to run its course, and the restructuring of life that eventually follows, is an experience that cannot be successfully hastened or avoided. The emotional extremes, the sense of loss, of loneliness and sadness, and the powerless and confused response of friends all must run their course until there is the energy left over for the mind to reconstruct and adjust to the change required. It seems nothing can help, the whole process has a course of its own which must be completed before reconstruction can begin. This can be exasperating to the onlooker as well as the grieving person. Friends cannot help, and they often know it. Sometimes they get in the way, and often you are glad they did. One wonders what helps folk through these times. For many it is the structure of a lifestyle built around their interests. Jack has his garden, and this has increased in size because he now has Doris' garden as well. Doris always had the flowers in the front, and Jack had the back. Now he has the lot and it is incredibly tidy. On a recent visit, Megg could not stop herself from exclaiming that the whole place seemed to be pruned back, swept up and not a straggly edge could be seen. We all had a good laugh. I was glad I wasn't around or I would probably have lost a few inches off the arms and had the beard trimmed back.

We feel a change coming for us this year, too, mainly because we are tidying everything up, taking all the rubbish to

the tip and reducing our collection of 'things we might use' to a few essentials. There must be a reason for all this activity. The farm is being reorganised, too, so the operation of it is simple, sensible and productive, with our part-time commitment being taken more into account. We have decided to keep less poultry, so the daily chores won't take so long, and there will be less young stock at Christmas when the rush is on. It is as if we have finished our apprenticeship, and the time has come to really exercise all that we have learnt in farming and publishing. I think we will be going for simplicity and productivity in all our activities, so we can live in a more relaxed style, and perhaps even have that ultimate luxury, a holiday away as a family.

COMFREY CURE

Herbal Thymes from Western Australia reports a remarkable cure for a dog who had the mange. The skin was bare and raw. The writer liquidised one comfrey leaf in a blender with one cup of cold water and let it stand for 10 minutes. The green water was poured over the dog's back, and all bare spots covered with comfrey water. This treatment was repeated daily for two weeks. Healing of the sores commenced rapidly and in two weeks the dog was growing a new, black, shiny coat. She loved the treatment and, after one relapse and further treatment, was completely cured and never suffered with mange again until she died.

URGENT! NOW, IN AFRICA A CHILD'S LIFE IS WORTH A PACKET

Start 1988 on the right foot: send a \$31 Emergency Freedom From Hunger packet to a starving African family and save them.

As you know, each day of 1988 is not a celebration but a tragedy in Africa. 12 countries are again devastated by an extremely severe drought. A tiny part of Australia's birthday cake can help save people's lives and give new life to their land.

An Emergency Freedom From Hunger packet has been put together for you to help these people. The packet will save lives immediately and help these people secure their children's future. Please don't wait any longer and send the coupon today: your packet could already be there and helping many now. Send the coupon. Now.

A typical \$31 Emergency packet includes:

- medicines to combat malnutrition \$ 9
- one small bag of seeds: \$ 5
- one plough share: \$ 6
- a share in a diesel water pump: \$ 5
- logistics and administration for emergency food relief: \$ 6
- \$31**

We deliver

There is often confusion about aid to the starving, especially in Africa. By permanent monitoring and direct partnership with the local people, Freedom From Hunger and other major agencies guarantee that the aid reaches its recipients.



FREEDOM FROM HUNGER

Yes! You can improve the world through us.



HURRY! If you don't act today, 1988 is going to be a nightmare.

Please, on my behalf send the following order to starving African families.

I ☐ 2 ☐ 3 ☐ 4 ☐ Emergency Freedom From Hunger Packets at \$31 each

I enclose my cheque/money order or please debit my

Bankcard ☐ Visacard ☐ Mastercard ☐ Card No.:

Name: (Please Print)

Address:

..... Postcode:

Signature:

If you wish, you can also order by phone on 008 023 433, STD free, 7 days a week, 24 hours a day.

Gifts are tax deductible.

**Free: with your receipt
a photo of the delivery.**

Freedom From Hunger,
PO Box 1379 Darlinghurst NSW 2010.

EFH

Recent Releases

This page is to become a regular feature of the magazine, where we will present information about newly published books that we feel will interest readers. Included will be details of prices and publishers, so that you'll then be able to go to your local bookshop and order any of the books mentioned here. We will no longer be distributing books for other publishers so if you're interested in buying any of the books described here, please order them through your nearest bookstore.

THE CREATIVE VEGETARIAN — Sally & David Clare.

A great deal of travel, restaurant experience and research have gone into this book. It begins with practical information about healthy diet and advice on becoming a vegetarian, then presents a selection of wonderful recipes for soups, main courses, desserts, sauces and salads. Some ingredients may be unfamiliar, but your local healthfood store should be able to provide most things you need to create your own delicious vegetarian dishes.

P/b, 137 pp, Aust, Nature & Health. Distributed by Allen & Unwin, RRP \$9.95.

DYEING FOR FIBRES AND FABRICS — (ed) Janet de Boer.

This should be a valuable reference for all those interested in working with fabrics. It presents in very clear style information and instructions for a wide range of dyeing methods, using both natural and synthetic dyes. The writers are all experts in their particular fields and beautiful colour photographs illustrate their work. All the stages of preparation and use of dyes are discussed in detail and the book also contains lists of useful reference books and suppliers of materials and equipment for dyeing.

P/b, 112 pp, Aust, Kangaroo Press, RRP \$14.95.

HOMOEOPATHY: THE FAMILY HANDBOOK

Homoeopathic remedies assist the patient to regain health by stimulating the body's natural healing forces. This handbook provides a clear introduction to this type of treatment, making it easy to identify the most suitable remedy for many common problems and illnesses. Now it is possible to use homoeopathy yourself as one aspect of taking control of your own health and wellbeing. There is a guide to symptoms and commonly used remedies, first aid, children's ailments — even advice on homoeopathy for animals.

P/b, 126 pp, UK, Allen & Unwin, RRP \$12.95.

THE WHOLE GRAIN COOKBOOK — Arto der Haroutunian.

If you thought grains were boring, this book will show you how versatile they can be, in a selection of delicious recipes from many lands. There are sections on rice (lots of recipes here), wheat, barley, millet, buckwheat and rye, including background information on each grain as well as recipes combining them with meat, vegetables, fruit and nuts. Now a healthy diet can be varied as well as nutritious, and you can bring a touch of the exotic to family meals.

P/b, 243 pp, UK, Pan Books, RRP \$15.95.

THE POTTER'S PROJECT BOOK — Peter Cosentino.

The ideal reference for both beginners and experienced potters who want to develop their skills, this book shows how to produce beautiful and functional pieces in your own workshop. After outlining the basic equipment and techniques needed for pottery, the author goes on to give step-by-step instructions for a wide variety of practical projects — from simple jars and dishes to complete dinner services or chess sets. All steps are clearly illustrated and colour photographs show the finished articles.

H/b, 144 pp, Aust, Nelson, RRP \$29.95.

AUSTRALIAN LEADLIGHTING — Paul Danaher & Dexter Jackson.

Intended as a guide for the beginner, this book commences with a clear outline of the materials and equipment needed for this craft, then describes the main techniques used to create beautiful glass windows, panels or lampshades. The final section consists of over a hundred designs which you can enlarge and use for your own projects. The designs range from traditional to abstract and include many featuring Australian birds and animals.

H/b, 154 pp, Aust, Nelson, RRP \$35.00

SOY SOURCE — John Downes.

Subtitled 'A practical guide to cooking with soy foods', this book presents a range of delicious ways of using the various soy products now available — tofu, miso, soy sauce and milk, tempeh and yuba. The names may be unfamiliar, but the results will be mouth wateringly different. John Downes, well known for his *Natural Tucker* books, describes the main ingredients and their uses, then gives a wide selection of recipes for soups, noodle dishes, main courses, salads and desserts. Nutritious eating for the family, and wonderful dishes for special occasion entertaining.

P/b, 127 pp, Aust, Nature & Health. Distributed by Allen & Unwin, RRP \$9.95.

TAKING THE PLUNGE: ESTABLISHING A SUCCESSFUL SMALL BUSINESS — Scott Holmes.

How do you go about starting your own business? And, more importantly, how do you make sure your business venture survives and prospers? This book provides straightforward practical information to help you 'take the plunge' into your own small business, with advice on planning and organising, book-keeping and finances, taxation, insurance and advertising. As well, there are interviews with people involved in a variety of enterprises, discussing where their businesses have succeeded — or failed. Very helpful for anyone planning a new venture.

P/b, 146 pp, Aust, Nelson, RRP \$35.00

A HANDBOOK OF ASTROLOGY FOR AUSTRALIA & NEW ZEALAND — Jane Bennett & Craig McIntosh.

With growing interest in astrology, this timely handbook should become a useful reference. The information relates to this region and is presented by people with long experience in the practice of this ancient science of life. They discuss the basics of astrology, its relevance to healing, fertility and counselling, as well as modern tools and future trends. The book concludes with a handy reference section, including a selection of astrological charts of well-known Australians and New Zealanders and a regional directory of practitioners and teachers.

P/b, 283 pp, Aust, Greenhouse Publications. Distributed by Macmillan, RRP \$16.95.

CHAMOMILE FARM — Lyle Williams.

Here is living proof of the value of organic growing methods. Lyle Williams' delightful book tells the story of Chamomile Farm, from its uncertain beginning as a paddock of turnip weed to its present position as a showplace of successful organic gardening. He describes the good times and the bad, all the hard work that went into the venture and the special contributions of each member of the family. Along the way, he also gives invaluable advice on soil preparation, compost, mulching and many other aspects of chemical-free gardening. Very positive and encouraging reading.

P/b, 127 pp, Aust, Hyland House. Distributed by Thomas Lothian, RRP \$19.95.

SECRETS OF THE CHINESE HERBALISTS — Richard Lucas.

World-famous herbalist Richard Lucas presents the results of many years of research and practice in this area. He describes a multitude of safe, effective herbal remedies that have been developed during thousands of years of Chinese medicine, with case histories of patients who have used them successfully. As well as detailing home treatments for digestive and circulatory problems, arthritis, nervous tension and many other ailments, the book also offers advice on diet and other ways to health improvement.

H/b, 236 pp, USA, Parker Publishing Co. Distributed by Prentice-Hall, RRP \$39.95.

GRASSIFIEDS

PROPERTY FOR SALE

NEW SOUTH WALES

GOULBURN AREA. 40 acres plus a 3 BR house, property has 2 dams, is partly timbered, pigyards, horseyards, milking bail and fully lockup garage. House is fully insulated wall and ceiling, electricity connected, steel-framed, hardiplank exterior, 7000 gal r/water concrete tanks, slow combustion stove for hot water and heating. Price \$80,000. Ph: 048-851-193.

DORRIGO Plateau. 8 acres, half cleared. Great homesite. Lovely trees, good access, power and phone adjacent. \$42,000. Ph: 066-574-136 at night.

NORTHERN RIVERS. 28 km Grafton, 40 ha (100 acres) on Kangaroo River. Luxury house, passive solar design, 3 levels, verandahs all round, drive-in underneath house, room for three cars. Main level, built-ins every room. 3 bedrooms, 2 bathrooms, kitchen, breakfast room, laundry/sewing room, spacious lounge/dining room with open ceiling and tile fire, separate rumpus/billiard room. Top floor, 2 bedrooms with built-ins. Indoor planter-box visible from main level. 240V, 2000 watts solar power, two solar hot water systems, phone, sealed road, sheds, unique four-span, suspension foot bridge over Kangaroo River. Fruit trees, tea tree plantation (oil), beautiful setting — native birds, kangaroos etc. Suitable home hosting. Easy drive Nymboida White Water Course, rain forests, Aust. Agradome, beaches etc. Nearest neighbour 1 km. School, store, tavern etc. 10 km. \$220,000. Brian or Dorothy 066-493-014.

URBENVILLE. 30 km south of Qld border. 55 acres of undulating, lightly timbered land with approx 25 acres cleared. Adjoins small piece of crown land with 100' waterfall on permanent running creek and is 3 km from Yabra State rain forest. 2 dams, stock yards, hay shed and partially built living shed with septic, electricity and telephone connected. Bitumen road frontage with school bus service. \$50,000. Ph: Don Jensen 044-221-916 after 6 pm.

FULLY EQUIPPED AND FURNISHED council approved inground dwelling overlooking river on alternative lifestyle community near Glen Innes. Will consider exchange house/land. Contact PO Box 535, GLEN INNES 2370.

BOOROWA. 63 acres 1½ hours from Canberra. New boundary fencing, two dams, tractor, caravan. \$40,000. Ph: 048-834-281.

BEMBOKA-BEGA VALLEY NSW. 360° beautiful mountain views, permanent creek water, pasture plus timber, power and phone available, sealed road access, school and shops 10 mins, 27 acres, \$22,500. 32 acres, \$25,000. Write: Piers Hodgson, RMB 126 Tathra Rd, BEGA 2550.

NORTHERN NSW, BARKER-VALE. 190 acres, 25 mins to Kyogle and Nimbin, 10 mins to Border Ranges National Park. Permanent water, waterfalls, creekflats, frost free, great soil. Large machinery shed. \$150,000 includes 11 acres subdivided. Will sell separately \$18,000. Ph: 07-846-3191 or write to John Creed, 20 Louisa St, HIGHGATE HILL 4101.

UPPER TWEED VALLEY. Peaceful country living, spectacular mountain views. 110 acres, creek, electricity \$83,000. 105 acres, 3BR house, phone, 37' inground pool, 60' shed \$135,000. 5 acres, electricity, dam \$31,500. A. R. Budd, UKI 2484. Ph: 066-797-145.

NORTHERN NSW. 731 acres secluded bushland, undulating, permanent water, grazing, close to Copeton Dam; good fishing, swimming. Building permit. Urgent sale \$18,000. Ph: 067-231-286.

WOLLUMBI. Three acres of lovely river frontage with weekend cabin. Electricity, phone, permanent water and building permit. \$48,000. Ph: 02-918-0712.

DUBBO 60 acres, house, good water, fencing, sheds. \$55,000. Ph: 02-534-5192 AH.

BELLINGEN 8 minutes. 140 acres, mountain top retreat. 1000'. Sea, valley views. 4 spectacular sites. 2 acre terrace with dam. Suit nursery. Beautiful trees, ferns. M/O zone. \$45,000. Ph: 03-439-5395.

NAMBUCCA VALLEY. 4 BR on 5 acres, lounge, sep dining room, eat in kitchen, W/I pantry, bath, sep, toilet, extra shower and toilet in laundry, 2 garages. \$98,000. Ph: 065-696-187.

ACRES 125 river frontage on Wollondilly River. 50 km from Mittagong, approx 2 hrs from Sydney. All weather road. Great for bush walking, canoeing and trail bikes. Has 2 bed furnished log cabin, generator, jeep and bush buggy. Freehold. \$75,000 for quick sale. Ph: 02-525-9782.

10 ACRE SHARE in 1000 acre valley. Large shed with solar power, water tank. House site cleared with foundations, suit mudbrick. Beaut views. \$16,000 ONO. T. Brennan, Blackhorse Ck, Whights Rd, via KYOGLE 2474.

**DEADLINES: GR 67 – APRIL 29TH
GR 68 – JUNE 30TH**

NORTHERN NSW — TABULAM, foothills Gibraltar Range, bordering state forest. 100 acres partially fenced, uncleared spotted gum, ironbark, all weather access, secluded yet many settlers succeeding in region. \$18,000. Bob Roden, Ph: 067-784-964.

NUMBER OF APPROX 100 acre blocks freehold, timbered, undulating with small areas that can be cleared, kangaroos, wildlife etc. 12 miles north to north west of Glen Innes from \$18,000. Apply John Donaldson 264 Grey St. GLEN INNES 2370 Ph: 067-323-095 day. 067-323-294 night.

SOUTH CASINO, 300 acres of beautiful bushland, with permit to build. A wealth of timber: permanent creek frontage. Excellent value at \$24,900. Also, nearby, 100 acres: \$19,900, & 1500 acres for \$75,000. Ph: 047-514-848 or write to PO Box 39, SPRINGWOOD 2777.

NSW CONGO 13 acres. Large 3BR home, v. large shed, outbuildings, ocean views, dams, permanent spring, suitable horses, goats, sheep, cattle. 6 km Moruya. \$230,000. Ph: 066-853-410.

MID NORTH COAST, mudbrick/timber frame home on 10 acres adjoining state forest in quiet valley, 15 min Macksville, 30 mins beaches. The land is of hardwood forest, 2 acres pasture, northerly aspect, 100 organically prepared holes for fruit trees. The home nestled in timber setting is of pole frame raft slab construction with 2 bedrooms, open living and kitchen area, study/loft and cellar storage room. Outside mudbrick bathhouse/laundry. Other buildings, 9 x 6 m shed, double carport and tackroom with holding yard. Rainwater tanks cap 10,000 gals, phone connected, power avail 100 metres, 3 km school bus. Price \$82,000 neg. Ph: 065-696-116 or 065-642-219 anytime.

NYMBOIDA, Bush retreat. New brick veneer house to lock up on 55 ha (140 acres). 5000 gal tank, large dam, secluded, panoramic view, 45 km west of Grafton. \$54,000. Ph: 066-494-202.

CAPTAINS FLAT 45 km east of Canberra, 1 hr to coast. 3 bedroom fibro-weatherboard house on ½ acre FH. Furnished, combustion stove-heater, elect stove HWS, sewer, newly painted, garden shed. Not a mansion but comfortable. \$30,000 or exchange for acres mid Nth Coast NSW. Ph: 065-617-101.

MOUNTAIN RETREAT situated on foothill of Brown Mountain, Snowy Mountains Highway, Bemboka, 100 acres medium timbered land. 40 acres lush tropical rainforest, tree ferns and rock orchids in abundance, flora and fauna to be admired. Only 1¼ hours to skiing and 40 mins to beach. Ideal location. Excellent for farming deer or possible nursery. Can be completely self sufficient. Easy access. Small cabin with loft, may be used as temp dwelling. Virgin land. Permanent mountain stream backs on to state forest. Must be seen to be truly appreciated. Reluctant sale. \$56,000 ONO. Ph: 02-901-274.

RENOVATED OLD 2 B/R COTTAGE in village. Over ½ acre, slow comb stove and heater, septic, power, phone, unlimited water. Young fruit trees, veg garden. Chook yard, sheds, workshop, carports, school and rail 2 mins. Low rates. \$40,000. Ph: 063-681-080.

COFFS HARBOUR, 4 hectares north facing, secluded valley, 18 kms PO, no improvements, opportunity to establish a lush sub-tropical system in a quiet peaceful but not remote location. 4 Park St, BELLINGEN 2454. Ph: 066-551-534.

FAR SOUTH COAST — WAPENGO. 12 acres timbered land adjoining state forest with approx 3 acres fertile creek flats and permanent water. Power on site. Close to coast and national park beaches with good access from Tathra/Bermagui Road. \$41,000. Ph: 064-941-507.

PARKES NSW. Large 4 bed house, pot belly, fuel, elect stoves, oil heat, fully carpeted. ½ acre, garage, town/tank water, close to shops, school bus passes door. Rural views. \$47,000. Ph: 068-624-532.

BEAUTIFUL TIMBER COTTAGE on ½ acre. Gravity water, electricity, septic. In mountain village with a primary school and large alternative community. Nearest town Dorrig. Ph: 066-578-128.

GRASSIFIEDS

PROPERTY FOR SALE

NEW SOUTH WALES

WANDANDIAN SOUTH COAST 23 acres plus four bedroom house, brick veneer, four years old, stables, sheds etc, access to creek. \$132,000. 80 acres, three bedroom older house on river front, \$135,000. Ph: 044-434-245.

TABULAM 200 ACRES. \$56,000. Permanent creek, rich creek flats, two frost free plateaus, 1/3 forest balance good grazing, excellent soil grow anything, school bus, sealed road. Phone, electricity. Ph: 066-880-181.

SECLUDED 40 ACRE BUSH BLOCK with fertile river flats on Moruya River, nine miles from Moruya. Bush homes, orchard, solar power, phone, some fences, national park on two sides. Dual occupancy status makes it suitable for two couples. \$65,000. Ph: 044-742-120.

MID NORTH COAST 20 acres near Wingham/Taree. Undulating land, scattered trees, gully, creek, phone, electricity, sealed road, school bus. Nice rural and mountain views. Very private. Close to Manning River. Great canoeing. \$29,950. Ph: 065-523-141.

DORRIGO fronting park, two minute shops, 3 BR, lounge dining sunroom, 2 gar., trees, shrubs, oil gas heaters. \$65,000. Priv. Ph: 066-572-420 AH.

TAYLORS ARM 28 acres permanent creek/flats, state forest adjoins, 10 minutes school, pub, 40 minutes Kempsey, 30 minutes Macks-ville. Beaches, good access, trees, building permit. \$39,000 ONO. Ph: 044-651-102, nights.

CO-OPERATIVE LIVING OPPORTUNITY \$7500 for 10 acre share in 1000 acre valley. Black Horse Creek, KYOGLE NSW. Established 5 years. Dianne Maclean, Ph: 07-371-7030.

QUEENSLAND

GYMPIE SECLUDED 57 acres freehold hilly bushland, small A-frame house on slab, state forest 3 sides. Phone, solar power, concrete tank, wood stove, hot water, shower, permanent dam, easy access. 11 km south of Gympie. \$65,000. Ph: 02-476-1149.

FOR SALE CENTRAL QLD. Peaceful private 26 acre property. Superb mountain views and abundant water. Land suitable for small crops and animals. 12 acres grassed, rest bushland. New orchard, vegie patches, chicken and duck pens, horse yds and many sheds. All this plus a quaint older style 2BR cottage with power, phone, septic and combustion stove. Only 1 mile from swimming and fishing spots. Perfect property for those who wish to be self-sufficient with some modern comforts. Reluctantly reduced from \$62,000 to \$48,000 for urgent sale. Ph: 079-741-278.

40 ACRES UNSPOILT FOREST. Small area rocky ridge, majority good soil. Dam. Beautiful, secluded and quiet. 25 mins Wondai, 40 mins Kingaroy. \$12,500. Forced sale. Write: PO Box 75, TRINITY BEACH 4871.

FOR SALE five acres Nanango, south east Qld. \$8,000 ONO. Ph: 079-744-108.

20 ACRES. Peaceful rural living. Comfortable timber lined cottage, council approved. Potbelly, wood stove, HWS. Selectively cleared, partly sown to pasture. Quality fencing, sheds and yards. 2 dams. Irrigated tagasaste trees, gravity feed to garden. Dozer with hydraulic blade, tractor and implements. \$48,700. Ph: 076-951-144 BH. Box 118, MILLMERRAN 4357.

ROSEWOOD, mown 10 acres, 1 km township, railway, easy commuting Ipswich, Brisbane. Good soil, suitable small crops, horses, children. Good road, fenced three sides, no water or electricity. \$20,000. Ph: 07-375-5004.

STANTHORPE, bordering 8000 acres pine forest and orchards. (Season work avail.) 30 acres, peaceful comfortable w/ender, 10 acres nat bush, 20 suit stock/vegies, 2 dams. Phone on, power avail, shop, school handy. Sheds, vegie garden. \$40,000. Ph: 076-833-272.

TARONG. 20 acres, mostly bush with cabin, permanent water if required, backed by national park. 20 mins from Nanango, Kingaroy. \$22,000. Or exchange. Ph: 071-416-457 or 071-917-192.

NOOSA-NAMBOUR SE QLD. 6 acre share in 320 acres Yandina, estab 15 years. Unique secluded rainforest valley, close to everything, sparkling stream. Large 3BR 2 storey home, lots of character, extensive verandahs, forest views, suit handyman. Estab garden, orchard, 100+ bearing fruit trees (38 varieties), sheds, equipment. \$55,000 ONO. Warren, Ph: 071-435-109.

TARA QLD. DARLING DOWNS. 44 acres bushland. Excellent alternative lifestyle close to Condomine Dam on Chinchilla road. Must sell. \$7500. Ph: 068-422-182.

N.W. OF TOWNSVILLE. Isolated 80 acres sclerophyll forest. \$80,000. Seaview Range. Ph: 077-763-177 BH, 077-763-896 AH.

QLD 40 ACRES tall virgin forest, 2 deep cool dams, solid pad for cabin or van. \$16,000. Ph: 004-581-339.

NO REASONABLE OFFER REFUSED. 20 lovely undulating acres, Millmerran Woods. Dam. \$9500. Vendor finance available. C/- Ph: 068-488-263.

CENTRAL QUEENSLAND COAST — 15 acres selectively cleared couch pastures, good fencing, 2 paddocks, 2 yards, 2 dams, bore, concrete water tanks. 1 yr old full brick house (colonial style), 3BR cathedral pine ceilings. Solar hot water, septic, phone, large double storey shed/studio. Suit stud/turf farm, nursery, dog kennels. Lister generator and 12 volt system. C.E.B. power available. School bus at front to excellent preschool, primary and high, 6 km to Miriamvale township and school, 45 mins to Gladstone, 90 mins to Bundaberg, 30 mins to beach. \$80,000 ONO. Will exchange with cash for house in INNER SYDNEY. Job transfer must sell. Ph: 02-818-4704.

MOUNTAIN VIEWS, beautiful high position. 80 acres Glen Aplin. 15 mins from Stanthorpe, 2 1/2 hrs from Brisbane. Natural bushland, some clearings, dam, quiet healthy environment. Proposed subdivision two 40 acre lots close to power, school bus, garage, shop, 150 peach trees. \$48,500. Enquire 07-285-5497.

TARA-CHINCHILLA AREA. 2 hrs Toowoomba. 37 timbered acres. Large 3BR house with S/C granny flat. 6000 gal rainwater, dam, phone, solar power, school bus, mail at gate, S/C stove, gas fridge. \$35000 ONO. Separate 37 acres, dam, mail, school bus, plenty of timber for log cabin. \$9000 ONO or \$40,000 for both. Ph: 074-653-536.

LAIDLEY. Exotic organic orchard. Spacious new highset 4BR home, bathrooms, wool carpets, solar HWS, heater, phone, power, all amenities. 5 km Laidley. 10 acres, 700 fruit trees, promising income, 110 varieties, irrigation system, large dams, horse paddocks, shelter belt of bush, gardens, playground. Owner transferred. Sacrifice at \$98,000. Ring owner 075-651-871.

TOOWOOMBA QLD. 300 acres eastern escarpment. Power, phone on boundary. well. creek. 15 km Toowoomba. \$65,000. Ph: 076-307-271.

YANDARAN QLD. 42 kms north of Bundaberg on Mordwar Rd (28 kms long) 1/2 way between Yandaran township and Bruce Hwy. Isolated from cane fields. 55 acres of beautiful parkland like undulating light bush. Sheds and 5000 gal water tank. Confirmed large dam site. \$25,000. Contact Eric Wills, AVONDALE QLD. 071-761-223 or Pauline Richards GLADSTONE TAS. 003-572-234.

RAVENSHOE NTH QLD. 46 acres open forest, redgum, box, ironbark, backs onto state forest. Cleared homesite and access road, creek on boundary. Only block with view of valley and creeks. Bitumen road frontage with power and phone avail. 10 km from town, 3 mins to picturesque Little Millstream Falls and swimming hole. 20,000 gal concrete tank supplied when permanent dwelling erected — transferable. Sell \$37,000. Ph: 077-714-164.

NU-STEEL 2BR HOME ON 2 ACRES. Power, phone, 5500 gal concrete tank with pressure pump. Full plumbing throughout. Dam, beautiful bush setting amongst gums and wattles. 40 km Gympie, 50 km Maryborough. \$48,000. Ph: 071-857-178.

50 ACRES FREEHOLD LAND. Small dam, all fenced, power. About 20 km from Gympie Qld. Wish to sell as we are now settling north. Ph: 070-912-960 or write to G. Cullen, 34 Tolga Rd, ATHERTON 4883.

300 ACRES, 3 creeks, power, phone, school bus. General store/petrol 5 mins. Fronts road to Agnes Waters/1770 30 mins, Bundaberg 45 mins. GR neighbours. On market \$68,000, very negotiable to GR's. Ph: 042-743-658.

SMALL AVOCADO FARM. Good home, all equip, bore. \$75,000. SUGAR COAST. Ph: 071-266-201.

MARYBOROUGH QLD, beautiful 95 yr old Queenslander on 9 acres. 2 titles, permanent dam, rainforest creek and windmill bore. 3 large bedrooms newly carpeted, polished floorboards in lounge and dining. Newly renovated kitchen and bathroom, sunroom, laundry and beautiful wide verandahs. Lovely surrounds with many established plants, trees, including fruit and nut, and vegie garden. 10 min from town on bitumen road, power on and phone. Family commitments force us to sell. Negotiable price at \$90,000. Ph: 071-231-583.

GRASSIFIEDS

PROPERTY FOR SALE

QUEENSLAND

30 ACRES TARA REDLAND ESTATE. Cypress pines, ideal private retreat. Urgent sale. Ph: 097-611-965. Private sale \$15,000.

BETWEEN ROCKHAMPTON/MACKAY on Bruce Hwy. 1½ acres, landscaped block beam home. owner built 6 yrs. 2BR, lounge, dining room. 2 sunrooms, kitchen with wall ovens/pantry, interior toilet, bathroom, laundry. 10' x 10' fish pool, stone fire place, tiled floors, bookcases, built in w/robes. With attached 32' x 16' workroom, sheds, bush houses, 250 bearing fruit trees, custard apples, pawpaws, passionfruit, grapes, etc. 4 km to virgin beaches, islands, rainforest. 300 m shops, ambulance, school, railway. Plus: council-approved craft centre 26' x 18' building, toilets, parking, landscaped. The lot \$48,000 WIWO. (Also available: adjoining 1½ acres, water & light on, \$12,000, plant nursery stock ½ price.) Ph: owner 079-502-240.

VICTORIA

UNIQUE ROUND MUDBRICK HOME nearing completion on 26 acres in East Gippsland. 8 acres cleared, rest bush, permanent river. \$66,000 neg. Ph: 051-583-264 weekends. P. Bartlett, C/- PO, CLUB TERRACE 3889.

GLENORMISTON quaint three bedroom home set in rural village, 9 km Terang, town water. Included block of land either side ideal for vegetable gardens. Large trees, good shedding, PO store 300 mts. School bus passes door. Ideal home or retreat. \$39,000. Ph: 055-925-420.

3 BEDROOM CEMENT RENDERED MUDBRICK HOUSE. Very large block in country town. Close to all amenities. Fruit trees, fowl and goat yards. Very good condition. \$45,000. Ph: 054-612-887 or write Allan, 6 Goldsmith St, MARYBOROUGH 3465.

TASMANIA

UPPER ESK 13 acres, South Esk river frontage. Tar sealed main road, phone, SEC, good house sites. Half bush, half pasture. Write M. Webster, 1 Glenfern Rd, FERNTREE GULLY 3156. Ph: 03-758-2798.

LORINNA. 25 acres with beautiful handcrafted timber home in mountain valley. 3 BR, cosy wood heating and cooking, gas lighting, 5 KVA generator, school bus to Sheffield. \$38,500. Also 2 x 25 acre blocks, one with barn, other hut. \$18,500. All with permanent water, forest and cleared land. Ph: 066-558-538.

GLADSTONE NE TAS. House on ¼ acre, \$19,500 ONO. Edge of small township (corner store, small primary school, nursing sister in residence, pub) with bitumen road, power, town water, telephone, septic, rainwater tank. Newly renovated throughout — lots of pine lining and kitchen benches. Split level between kitchen and lounge room. 3BR, laundry, shower room, sep toilet. Timber clad, verandahs on two sides. Very large iron shed, very large veggie garden. Contact Pauline Richards, GLADSTONE TAS. Ph: 003-572-234.

KOONYA, TASMAN PENINSULA, TAS. 12 sq 2BR cottage on ½ acre, sandy loam. Includes 6 x 12 m workshop/studio, space suitable for cottage industry with tourist outlet. Close to beach. Good neighbours. \$39,000. RMB 1350, KOONYA 7187. Ph: 002-503-434.

ELEPHANT PASS GRAY. Approx. 1½ acres, beautiful views, close to town and school, power connected by power pole, spring water, 10' x 12' shed, foundations for house, building permit available, photos available. Lots of potential. Must sell. \$7500 ONO. Contact by mail: K. L. Parsons, C/- Marribank Family Centre, KATANNING 6317.

SOUTH AUSTRALIA

30 ACRES DARWIN RIVER. 75 km from Darwin in growing farming community. Water from Darwin River boundary and beautiful permanent lagoon with fish and birdlife. Good soils and tree cover. Phone, electricity, school bus passing. Small shed, septic toilet, caravan, elevated water tank. A beautiful top end block. \$45,000. For details, maps, photos, write William, Fiona Harburn, PO Box 344, PALMERSTON 5787.

DARKE PEAK. Three bedroom TF home, excellent condition, all services. 1¼ acres, new fences. Price on application. Ph: 086-280-005.

MID NORTH — LAURA. Renovated 3BR bungalow, ½ acre, large garden, shadehouse, garage, sheds, fowl house, fruit trees and natives. Walking distance to facilities. Suit country loving person, but close enough to Port Pirie or Adelaide. \$44,500. Ph: 086-826-665 nights.

COMMUNITIES

MOORA MOORA situated on the top of Mt. Toole-be-Wong, one and a half hours drive from Melbourne, is a well established co-operative community of 6 clusters in 640 acres of bush and agricultural land. We seek a limited number of new families to join existing members whose interests are largely conservation, owner building, health, craft, music, agriculture and schooling. Write to 'Membership', Moora Moora, Box 214, HEALESVILLE 3777.

SE QLD 10 acre share 1200 acre farm. Mudbrick shack; various small sheds, fruit trees, windmill on well; good position bordering creek. Mountains in background. Private company ownership. 20 shareholdings. Currently reviewing constitution to favour environment protection. \$17,000 ONO. C. Hoare, Rose Rd, TUNTABLE CREEK 2480. Ph: 066-891-478.

ONE SEVENTH SHARE in 587 acres inland from Port Macquarie, 40% rainforest, river, creeks, waterfalls, up to 25 acres per house site, excellent views, soil, 10 km from village of Comboyne with primary school. \$13,500. Ph: 065-534-028.

2 ACRE SHARE in established permaculture on Atherton Tableland (over 200 fruit and food trees, chooks, goats, etc.) \$20,000. Hugh Skinner, PO Box 230, KURANDA 4872.

**DEADLINES: GR 67 — APRIL 29TH
GR 68 — JUNE 30TH**

MT MELLUM COMMUNITY overlooking Glasshouse Mt. and S'shine Coast. Fifth share (not fully paid off) in 20 acres of permaculture/biodynamic, regist. environmental school, special children camps, very exciting future plans, 1 acre housesite. \$15,000 with 28' caravan (\$13,000 without). PLEASE, there is much more happening. Write to Hardo Bottin, Lot 72 Reserve Rd, WARRANDYTE 3113, or call 071-941-512, ask for Chris.

NIMBIN 3.5 ha share (surveyed) in M/O, pastured and timbered areas, small permanent creek, elevated view of Nimbin Valley, near completed house, solar power and water heating. Includes slasher, 5 KVA gen, 4 wheel m/cycle. \$55,000. W. Potocky, PO Box 230, NIMBIN 2480.

MUNGARRA PERMACULTURE Research Farm and the God Love Community and the Bredbo Survivalists are looking for more members. We have 17 in our group. We are located on the Jim Cairns Down to Earth land in the opposite valley to Mount Oak. We are separated by a large mountain range and not controlled by Mt. Oak. Suitable people will be given \$1000 to buy a caravan if they need it. The group has one underground dwelling of 70 square metres with a tank and one open air dwelling of 70 square metres with a 10,000 litre tank. We are on a creek with permanently filled rock pools, and are fully equipped with pumps, chain saws, etc. The group is a registered association run by a board of 13 trustees, a residents' council to be set up in the future when a quorum exists, and a Free Land Forum open to anybody in the world. We have a medical practitioner as a member and 2 horticulturists. We have free temporary accommodation for new members. The group also has a village block in Bredbo with town water to grow fruits and vegetables and a 6 BR house in Canberra where part time members who want to work in Canberra can live at reduced rent. 5 new members will be given the \$1000 plus 5 extra new members can join. The group follows the Down to Earth and Mt. Oak environmental guidelines. Ring Marc, 062-864-223 or write to 148 Beasley St, TORRENS 2607.

ONE TENTH SHARE in 140 acres of rainforest bordering Nightcap National Park. Own use of lovely fenced 5 acre hollow beside creek. Shed on site plus enough used building materials to make cottage. 2 WD 10 minute from Nimbin. \$8000. Write C. O'Sullivan, C/- PO, NIMBIN 2480.

STRATA TITLE to surveyed one hectare block in large community of owner-builders, whose company owns total property of 400 hectares. The block is cleared, with excellent soil and access to water. It borders brushbox forest and has great views. 40 minutes to Lismore. \$14,000. Northern NSW. Ph: 066-857-959.

UNIQUE HANDBUILT COTTAGE on a secluded hilltop within 3500 acre multiple occupancy community of 100 people. 30 miles east of Glen Innes. \$12,000. Ph: Allan 02-327-1190.

ONE SEVENTH SHARE 400 ac. Bulga Plateau, borders state forest, perm water, 70 km from Taree. \$13,500. Ph: 065-504-552 or 065-504-599.

GRASSIFIEDS

COMMUNITIES

SHARES in council approved hamlet development, Murwillumbah area. Approx 12 acres each. Majority beautiful rainforest setting with magnificent Bangalay palms. Absolute privacy assured. All weather council maintained access. From \$16,500. Write to: Palmview, 30 Arndell St, MACQUARIE 2614 or phone 062-512-247 AH or 066-793-333 AH.

MID NORTH COAST — COMBOYNE. One fifth share of 640 acres of beautiful secluded wooded valley bordering on nature reserve. Includes 3BR home with slow combustion stove, hot/cold running water, phone, solar electricity, large shed, gravity fed irrigation, 2 dams, over 100 fruit trees, landscape gardens, permanent creek with good swimming holes. Ten minutes school bus, twenty to shops. Vendor finance available. \$42,500. Ph: 065-504-185.

THE LILLIFIELD COMMUNITY has 330 acres of beautiful land in the hills between Lismore and Murwillumbah. It's about fifteen minutes from Nimbin and an hour from the coast and is fully approved by the local council. Overall, the land is owned by an incorporated company but each member has shares which give entitlement to about 5 acres for private use. In addition, members share in over 100 acres of common land which is available to all for recreation, forestry, agriculture, etc. as well as having the use of the Community Meeting House, the tractor and other equipment. The Daystar Rudolf Steiner School is located on adjoining land. The basic framework of roads and dams has been completed and our initial membership has been established. Now we are looking for more people to help us move into the next stage of our developing community. People who will respect this beautiful land as well as each other. The share price of \$13,800 per household entitles you to all community facilities as well as to possession of your chosen 5 acre site. If this appeals to you please write to: 'Lillifield', Lillian Rock, via NIMBIN 2474 or Ph: 066-897-224.

TWENTIETH SHARE UTOPIA ENVIRONMENT RESERVE. 1300 acre property, 10 acre entitlement. Queenslander farmhouse, large shade trees, good soil suit sub-trop fruits. Access sizeable dam, situated 70 km west of Maryborough. Other shares also available. \$20,000. Contact Peter Gregory, Utopia Rd, BROOWEENA 4620.

FIFTEENTH SHARE in 535 acre community farm in Towamba Valley in south east NSW. Approximately 35 km from Eden and 15 km from school and shop. Mudbrick and timber dwelling, 2 large sheds, chicken run, cow bale and paddock, dam, creek, rain water tanks. No power, solar lights, phone connected. Established gardens, including a variety of fruit trees, usable land in idyllic bushland setting. \$28,000. Ph: 02-560-3161.

MOUNTAIN FOREST RETREAT. ½ share 400 ac. Steep eucalypt/rainforest, small cabin on ¼ acre clearing above perm creek. Hydro light, running H/C water, large kero fridge, flushing loo, good access. \$15,000. Lynne Davis, C/- PO, ELANDS 2429.

BLACKHORSE CREEK VIA KYOGLE nth NSW. One twenty-fifth share of 970 acres complete valley, 10 acres private entitlement. Very nice land, established community. \$8000. Ph: 070-676-292.

QUARTER OR FIFTH SHARES on 223 ha, 10 km Comboyne. 80 percent timber, rest pastures. Machinery incl. No drugs. \$28,000 or \$23,000 — v.f. neg. on 50 percent dep. Ph: 065-504-148.

FOR SALE 1 share in 1300 acre community located near Maryborough, Qld. Share consists of 10 acres, principal being bush, with area cleared around house and gardens. Liveable dwelling and nearly completed mudbrick house. Bearing fruit trees irrigated from pump on dam to holding tanks. Solar electricity and tank water connected. \$18,000. Contact Maree Howard, 43 Hillend Tce, HILLENDALE 4101, or Ph: 07-846-2281.

NIMBIN LAND SHARES. 2-10 acre surveyed shares on 380 acres. Deep creek, waterholes, wildlife. Cleared land and original forest. Fully council approved. 2WD access. Gravity fed water, all shares. Use of 200 acre common. Suit environmentally minded people. Harmonious living. Contact Mark Taranto, C/- PO, NIMBIN 2480 or message 066-891-492.

TO RENT

HANDBUILT HOUSE on Wyalaliba Community near Glen Innes. Nominal rent. Ph: Allan 02-327-1190.

TRANQUIL 3 bedroom family home and small farm by the sea, 56 km from Hobart, for rent between end of May and mid September. Bond \$500, rent negotiable. Ph: 002-921-640.

SMALL BASIC COTTAGE on five acres. Nymboida River frontage. 40 km west of Grafton, NSW. Remote and beautiful. Phone, no electricity. \$45 pw, suit couple. Ph: 066-494-134.

PROPERTY WANTED

CLEAN LIVING family require acreage with or without dwelling Qld. Cairns area. Must have permanent water, power available, close school bus. Up to \$20,000. Will consider renting or lease property. L & H Shanks, Box 200, ROEBOURNE 6718. Ph: 091-821-347.

FARMLLET UP TO TWENTY ACRES with livable house. Suitable for organic vegies and goats. North of Lismore (Kyogle, Nimbin, Channon). Present owners/tenants could remain under a suitable lease. Up to \$50,000. Box 279, GARBUTT 4814, or Ph: 077-891-083.

URGENTLY WANTED PROPERTY, rent, prospect buy, secluded, timber, permanent water, large old homestead or two houses, outbuildings, within one hour Bathurst, all weather road. B. Ford, C/- PO, BATHURST 2795.

SMALL FARM for rent with view to buy. Good home, power, phone, sheds, water. For pigs, beef cattle. Reasonably close markets, large city for work. Gippsland area. Write Pearson, RSD Main Road NEERIM NORTH 3821. Ph: 056-284-237. Evenings, weekends.

GRASSROOTER WANTS \$10,000 worth of mountainous land not cleared, reasonable access nth NSW. Ph: 067-772-472, Judy or Kevin.

BUSINESS FOR SALE

HEALTH CLINIC 308m², four treating rooms with showers, two walk in saunas, therapeutic bath, spa pool, room for expansion plus 72m² on option. Suit partnership. Naturopath, physio. A money maker for right persons. Low rent, council certificate. \$165,000 ONO. Townsville. Genuine buyers only to apply: PO Box 1934, TOWNSVILLE 4810.

COUNTRY PUB situated in Tasmania's beautiful north east at historic Derby. An excellent family business and very pleasant lifestyle. Includes 2 ac. and good trout stream with platypuses! Ph: Allen and Cheryl 003-542-360.

BUSINESS FOR SALE. Firmly established small engine business in southern Tasmania with great potential for further development. Well situated freehold property, with possibility of adjoining land suitable for expansion and/or residence. Turnover from July 1 '87 to Dec 31 '87 in excess of \$100,000, with similar projection for 2nd half year. Genuine reason for sale. Excellent dealerships. Ideal operation for hard-working husband/wife team, although some experience in small-engine repair would be desirable. Asking price of \$85,000 includes shop freehold, fixtures & fittings and present stock of approx. \$25,000. Tools and equipment available as required. Initial enquiries to: 'The Advertiser' RSD 156, CRADOC 7109.

NSW BELLINGEN laundrette/taxi in growing country town. Est 4½ years, no competition, takes \$850 p/w gross, income \$450/500 p/w. Would suit husband/wife team, trading normal business hours. \$50,000. Ph: 066-551-601 BH.

WHOLEFOODS, coffee shop & delicatessen Tasmania. Small town 45 mins from Hobart. Attractive older style building in shopping area. Includes shop with stock and fittings, 1BR flat, 2 outbuildings on double block. Business established 2½ years. Suit couple to share 60 hrs/wk. Has potential to expand to include naturopathic therapies, massage, crafts or part-time restaurant. Genuine reason for selling. \$75,000 WIWO. Ph: 002-971-797.

P.O. GENERAL STORE. 3BR res. Opp. Sugar mill. Tourist trade in crushing season, lease \$30 p.w. WIWO \$25,000. Ph: 071-266-201.

URGENT SALE. NURSERY BUSINESS. 'Mim's Mail Order'. 8 years established, with a good reputation. Specialising in herbs, old world perennials, rare species plants, seed and herbal products. Am seeking purchasers with an interest in this special line. \$6500 ono. Ph: Norma Kahler 045-763-486 BH & AH for further details.

HEALTH FOOD STORE Sydney, Penrith, large growth area (west). Well estab, busy shop, centre, good location, 750 sq. mt. (large enough for practice section). Must sell \$220,000 ann. t/o. \$45,000 + SAV. Ph: 047-311-017 BH, 047-322-867 AH.

GRASSIFIEDS

BUSINESS FOR SALE

OPPORTUNITY FOR qualified, self motivated mechanic and spouse to lease service station/workshop in SE Qld. Well established business. Regular customers. Good turnover. Accountant's figures available. Further information Ph: Mike 071-294-813 BH.

WANTED

IDRIESS BOOKS wanted — please write Vaughan, PO Box 93 HAMPTON 3188.

PENSIONERS with two children (14 & 8) would like to move to NSW on a line from Moree down. Does anyone have a reasonably priced rental house available? We are non-smokers and non-drinkers and our children are very well-behaved. T & J Stevens, PO Box 629, CABOOLTURE 4510. Ph: 071-953-863.

YOUNG COUPLE with small baby would like to rent land to put own caravan on, or rent cheap dwelling within driving distance of big city and walking distance to beach. Any offer considered N. NSW. Andrew Kitchener, C/- PO MYRTLEFORD 3737.

ESCARGOTS — edible snails. Stock of Helix pomatia (pref). Possible or potential growers please contact Ph: 069-493-539 Seppo (AH). Box 34 BATLOW 2730.

HOUSE TO RENT or caretake near Launceston or Devonport. Wanted by reliable family of three from May onwards. Quiet location preferred. References. Michael, 87 Dennis St, NORTHCOTE 3070.

GR COUPLE require long term caretaking position on acreage, between Grafton, Cooktown. We'd like some basic accommodation and pocket money. We offer resourcefulness and humaneness. Please reply to Karen & Bernie, 6/71 Hillside Cres, BRISBANE 4005 or Ph: 07-262-1120 anytime.

HOUSE TO RENT up to 5 acres. 3 bedrooms, close to school. North New South Wales. Option purchase. 4/37 Wallis Pde, BONDI 2026. Ph: 02-300-9035.

COUPLE, lots of animals, need farmhouse to rent or share. Smokers, non-drinkers, omnivores, into folk music, peace, green issues and gardening. Ph: 07-202-7265.

LAND TO LEASE with optional purchase to \$100,000 with family house and water. Preferably frost free. 067-233-274. Write D & J Chandler, TINGHA 2369.

TO RENT, 2 plus b' roomed cottage with small acreage. Power/phone preferred. Coastal NSW. For vegetarian husband/wife into organic produce/crafts. Will provide plenty of T.L.C. for your property. Up to \$50 p.w. Phone Jim Carruthers 02-523-6489.

I AM A WOMAN, 34, I love the earth, children, the arts and would like to hear from any communities or individuals with land for sale, 5 acres upwards, preferably green and rolling with access to bush, sea, and city (university, library, art gallery etc.). South Coast (around Berry?) or North Coast preferred. I'm not into drugs and I have 2 small, gentle dogs. Please reply to Kay Smith, C/- PO, AVALON BEACH 2107.

CARETAKER(S) REQ'D. April 20 to Nov 20, 1988. Sydney outer west near transport, S.C. bachelor flat provided. Pay only service charges and maintain garden and house. Write PO Box 649 BLACKTOWN 2148.

WANTED TO RENT. Small house/cottage with at least five acres with part bush. Long lease or rent preferred. Write to Ron, 68 Goondoola St, REDBANK PLAINS 4300.

WANTED — experience of organic living, incl building, power systems, livestock, gardening, in return for labour. Travelling Aust. from June/July 1988. I'm 31, fit, virtually vegetarian, anti hard drugs, experienced in radio/TV repair. Write: Stuart Ramsden, 'Navarre' Elmore Rd, RAYWOOD 3570.

WANTED — People inspired from heart and spirit sharing commitment to community living and healing work. From down to earth zen simplicity to reaching the stars, our vision embraces nurturing the earth and each other as extended family. Our focus, the fruits of co-operative living touched by mountains and sea of south coast, NSW. We share our love of springs, tribal healing herbs, qi-gong, oceans of meditation, breathing bridges of trust, love Ishta and Ken. Write C/- 16 Crescent Rd, MONA VALE 2103.

WANTED TO RENT with option to buy. House and small acreage. Close to town, schools etc. Pref NSW. Ph: 07-870-7787 anytime.

PRACTICAL PEOPLE WANTED. Singles, families, retired etc. to share organic 100 acres that I own. Northern NSW. You would have chance to settle (long term or temporary), sharing some work and good times. About me — male 44 vegetarian, non smoker. Charly, Box 56, TABULAM 2470.

NATIVE PLANT materials, wattle blossom, gum nuts, etc. All types, fully dried, native materials considered. Large quantities preferred. Good prices plus freight paid. Contact: Peter Hunt, P.O. Box 53, NORTHCOTE 3070. Ph: 03-489-8405.

TEETOTALLER seeks part time work on some earth walled or soft tech building in exchange for tent space and tucker. Barry McMahon, 9 Paloma St, SOUTH OAKLEIGH 3167.

SOAP RECIPES. Any information related to soap making would be greatly appreciated. Please write to: Cheryl Beasley, Lot 45 Jahn Drive, GLENORE GROVE 4342.

OPPORTUNITIES

SELF SUFFICIENT elderly German lady requires easy going hard working person to help with farm. Goats, chickens, garden etc. Caravan site available. Rent negotiable. Sophie Illma, Box 23, MERRIGUM 3618.

FREE SELF-CONTAINED accommodation including electricity, gas, wood in exchange for handyman/gardener to work P/T on 7½ acre property. Reply 'Wynstay' YARRAGON 3823.

DEADLINES: GR 67 — APRIL 29TH
GR 68 — JUNE 30TH

DOORS PLUS! Beautiful all timber, classical, historical, exc cond. Suitable owner-builder — creative design. French doors, large oregon and baltic frames — glass surrounds. Large sizes available. Incredible opportunity! Cast-iron hydronic radiators — last forever, old hand basins, benches, F.G. showers, Ph: 03-481-6869 or 03-685-706.

WOMEN, particularly young women, welcome to experience Christian communal living on our rural property for one week or more during September 5-30. Opportunity to explore meditation, communication, gardening, crafts, etc. Food, accommodation free. Write to Sister Helen, Sisters of the Church (Anglican), DONDINGALONG VIA KEMPSEY 2440. Ph: 065-669-244.

FREE RENT offered in caravan in exchange for renovating same. We'll provide materials. You provide the labour. Bathroom facilities would be shared. We are on a large, quiet, mountain property half hour from Brisbane's outer suburbs. Prefer GR type(s). Must be prepared to work. We don't want to be left in the lurch. Ph: 07-289-0156.

FEDERATION LIGHTS — classic, historical opportunity! Simple clean lines, embossed, art deco. Excellent condition. Ph: 03-481-6869 or 03-685-706.

CARAVAN OWNER with nowhere to live? We need a caretaker/farm helper for our small organic farm in Blue Mountains. Suit pensioner. Arrangements flexible. Write PO Box 118, OBERON 2787.

RED RATTLER TRAINS. Unique opportunity (2). No more available. Make excellent week-enders, exciting style and atmosphere, or business feature. 5-6 squares each. Ph: 03-481-6869 or 03-685-706.

CARAVAN SITE and use of irrigated ploughed land in return for one day maximum weekly mowing and brushcutting Mt Warning area near MURWILLUMBAH. Liisa Ph: 066-722-196.

PERMANENT RENT-FREE caretaking. Old house, yards, sheds and use of a few acres, isolated but near small country village. The Robinsons, 'Lilmor', Cassilis Rd, MUDGEE 2850. Ph: 063-735-312.

FREE RENT OFFERED to genuine GR handyman/caretaker with own transportable accommodation, on small bush property near Daylesford. No smokers, drinkers, drug users or pets. Reply Funny House, PO Box 176, DAYLESFORD 3460.

CARETAKER NEEDED — July to October for coastal hobby farm near Bega. Private nook, must be gardener, animal lover. To leave my worldly loves whilst travelling Greece. Contact Marina Pitsonis, RMB Sandy Creek TANJA VIA BEGA 2550.

EXCHANGES

EXCHANGE 100 ACRE bush block Goulburn area 60' x 30' machinery shed, new 23' x 16' garage plus carport. Exchange for week-enders Sth. Coast around \$45,000. Lot 3, Spa Rd. WINDELLAMA 2580.

GRASSIFIEDS

MISCELLANEOUS

WATER RAM pumps water with water pressure only, no motors or fuel. Pumps to 200 ft height. Requires fall of 5-20 ft from supply to ram. Pumps 30-220 gal/hr. \$185. Ph: 07-202-3253.

ORGANIC GRAPE JUICES and non alcoholic beverages, liquid organic seaweed for garden or farm. Mail orders delivered door to door anywhere in Australia. Write PO Box 314, Robinvale 3549. Ph: 050-263-955, or Demeter Bio Dynamic Fruit Juices, C/- PO POWELLTOWN 3797.

MEDITATE on the inner Light and Sound and transcend body consciousness under the guidance and protection of Master Sant Darshan Singh. True spirituality is a gift from God and is given free of charge. For further information, please contact Sawan Kirpal Ruhani Mission, 63 Morrie Cres, NTH BLACKBURN 3130. Ph: 03-898-8950.

SPECIAL REDUCED RATES. 1 kg net weight of mixed size worms (approx 4000 worms). For \$35 including freight NSW. \$4 extra interstate. For gardeners, fishing bait and aquarium food. We will not be beaten on price or quality on any order large or small. Enquiries to Wormborough Farm, PO Box 794, TAREE 2430. Ph: 065-539-633.

CHIP HEATERS. No electricity needed for instant hot water, operates from town or tank water supply. \$125.00 including packing and postage 'Heaters' 358 Centenary St, ALBURY 2640. Phone: 060-215-469.

RECYCLED BOOKS, useful and constructive titles. Old music 1800's to present day for piano, organ, guitar, violin etc. All items in good condition. Send for details to S. Carter, Box 73, MORTDALE 2223.

RED RATTLER TRAINS. Unique opportunity (2). No more available. Make excellent weekenders, exciting style and atmosphere, or business feature. 5-6 squares each. Ph: 03-481-6869 or 03-685-706.

DOORS PLUS! Beautiful all timber, classical, historical, exc cond. Suitable owner-builder — creative design. French doors, large oregon and baltic frames — glass surrounds. Large sizes available. Incredible opportunity! Cast-iron hydronic radiators — last forever, old hand basins, benches, F.G. showers, Ph: 03-481-6869 or 03-685-706.

BOOKS 2000 titles. Self help, health, astrology, psychology, tarot, religion, I-ching, cooking, nutrition, mysticism, ecology, meditation, graphology and more. FREE catalogue. Letterbox Books, 16 Station St, WHITEBRIDGE 2290 Ph: 049-499-151.

FOR SALE, 33 ft Leyland bus in Murgon Qld. Needs starter motor fixing. Decked out for living. Asking \$2000. Please ring Lisa on 090-215-351.

SLOW COMBUSTION and fuel stoves. Also parts for most old fuel stoves. H. Hall, BENDEMEER 2352 Ph: 067-696-661.

GENERATOR 4 KVA Lister plus battery charger, batteries, 450 watt, 240 volt inverter. Have convenience of 24 hour 240 volt power at about half operating cost of generator alone. \$3900. Ph: 09-538-1196.

FEDERATION LIGHTS — classic, historical opportunity! Simple clean lines, embossed, art deco. Excellent condition. Ph: 03-481-6869 or 03-685-706.

BLUE DAZZLER TORCH/SEARCHLIGHT. Powerful 30 watt beam and heavy duty battery rechargeable with ordinary 12 volt charger. Direct from factory, price \$75 each. G.B. Douglas, PO Box 215, WHITSUNDAY 4802. Ph: 079-466-738.

ENJOY SITTING IN STRESS FREE comfort on the Easi-Sit chair. Ergonomically designed, the Easi-Sit chair is an alternative way of sitting. If you have a back problem, this chair will definitely help you. Send for detailed pamphlet to Easi-Sit Industries, Freeport 2, PO Box 86, WARBURTON 3799. Ph: 059-665-689.

GENERATOR, English brush 7.5 KVA Morris 1500 cc, motor seized, factory made unit \$500. Ph: 045-736-150.

MASSAGE TABLES rigid and folding. For brochure send SAE to James Calvert, Glens Creek Rd, NYMBOIDA 2460.

SILKWORM EGGS & INFO — Dec. to June. You must have a mulberry tree for feed. You don't have to kill worms to obtain silk. Kids — \$4, adults — \$7. Info only \$2. All post paid. Special bulk rates for schools, senior cits., CYSS, etc. Random enquiries SSAE. No eggs sent after June. J. Parkin, PO NIMBIN 2480.

DEEP CYCLE BATTERIES, 15, ex Telecom \$8 each. Lawrie Edwards, 'Tamarisk', Marulan Rd, BUNGONIA 2580. Ph: 048-411-642.

FOR SALE BIO-LOO humus toilet model HT80M as new. Any reasonable offer. John De Roo, PO Box 432, STANTHORPE 4380. Ph: 076-812-973.

BATTERIES — eight — 6 volt 90 A/H in very good condition. Replacement cost approx. \$290 ea. Sell for \$110 each ONO. Lindsay, PO Box 10, HILLTOP 2575. Ph: 048-898-371.

URGENT SALE 32' Bedford bus 1968 model. Diesel, recon. motor and gearbox. Goes well would convert to mobile home. \$6500 ONO. K. Lightfoot, C/- PO TORRINGTON 2371. Ph: 067-321-811.

HANDCRAFTS

SANDALWOOD suitable for carving or aromatherapy and perfumery. Origin Queensland. Good value at \$25.00 a kg post paid. Limited stock. Please send your orders with cheque or money order to Sandalwood Products, PO Box 169, LINDFIELD 2070. Minimum quantity 500 g.

POTPOURRI & SACHET SUPPLIES. We have the largest range of materials for fragrant craft work at the lowest prices in Australia — economy and traditional potpourris, flowers, herbs, spices, essential oils, fragrant pots, drawer liners, sachets, pomander balls, fragrant gift lines, craft board stiffeners, books and much more. We simply are the biggest in the country, but cater to all requirements, the beginner to the chain store. Write for free mail order catalogue. Potpourri & Sachet Supplies, PO Box 53G, NORTHCOTE 3070. Ph: 03-489-8405.

ARE YOU CRAFTY but don't know how to sell your products for a self-sufficient income? Would you like to learn different ways to sell handicrafts, new ideas, patterns, correspond with fellow successful craftspeople, gain free advertising and all the advice we can offer? Our monthly newsletter is your key. Send \$22 subscription to D. Rockstroh, Crafty Workshop, Lot 1925, Helliwells Rd, MISSABOTTI 2449.

LARGE RANGE culinary medicinal herbs, edible plants, excellent herbal 'Health Through God's Pharmacy'. For catalogue, information articles, send 7 x 37c stamps to: Shipards Herb Farm, Box 66, NAMBOUR 4560. Planning to visit Expo 88? Like to join in herb and useful plant courses covering identifying, growing, using culinary, medicinal; held Nambour, just 100 km from Brisbane? Details of courses and farm walk dates send 3 x 37c stamps to above address.

HANDMADE 100% pure Samoan coconut oil toilet soap — no animal fat, medicated with papaya, lathers equally well in salt water. Pack of twelve 120 g cakes \$A10.00 post paid. Island Styles Ltd, Box 139, APIA, WESTERN SAMOA.

FAMILY TREE QUILTS: embroidered centre panel surrounded by patchwork with four loops for easy hanging. Original design. Choose your own colour combination. Send SAE to: Rita Summers, 'Kersbrook Nursery Crafts', Gladstone Rd, PIONEER 7264.

SHAMPOO BAR by Body Basics. A gentle yet thorough cleanser in convenient solid form. Rosemary and lemon oils condition the hair. Suitable for all hair types. No animal products used. No animal testing performed. One of a range of quality natural hand-made bodycare products. Write for mail-order brochure: Body Basics, 26 Aldgate Valley Rd, ALDGATE, 5154. Ph: 08-339-1536.

ESSENTIAL OILS potpourri and natural products — for aromatherapy and craft work. We are the manufacturers of raw materials for making massage oils, soaps, cosmetics and household products. Our extensive range includes: essential oils, absolutes, fragrances, vegetable oils, gums, waxes, extracts, potpourri, herbs, spices, essences, pottery and containers. Buy from us direct, small or bulk sizes, and save with our low prices. Send stamp for free catalogue to Auroma, PO Box 187, RICHMOND 3121 or call in at 22 Mount St. PRAHRAN 3181.

DERBY DUNGAREES: denim clothing for children — pinafores, overalls, pull-on jeans, jackets, for children 1-10 years. Reasonably priced. Send SAE to: Rita Summers, 'Kersbrook Nursery Crafts', Gladstone Rd, PIONEER 7264.

FOOD AND KITCHEN

EARTHRISSE SPIRULINA — 65% protein. Richest source of B12, Beta-carotene, chlorophyll, GLA. Contains no toxic chemical residues. ½ kg = \$24.00 p.p.d. 1 kg = \$44.00 p.p.d. D. Petley, Box 2430 SOUTHPORT 4215.

PURE DRIED BEE POLLEN, mixed light-house island flora, 425 g pack \$8, bulk p.o.a.: Island Bees, PMB Althorpe Isle, COWAN-DILLA 5033.

GRASSIFIEDS

FOOD AND KITCHEN

HOME STONE FLOUR MILLS Mill your own stoneground wholemeal flour for cakes and bread at home with a Retsel Little Ark Stone Flour Mill. 'Endorsed by Housewives Association'. Write for catalogues to: Retsel Distributors, PO Box 712, DANDENONG 3175, enclosing three postage stamps, or Ph: 03-795-2725. Distributor enquiries welcome.

WHEAT ORGANICALLY GROWN, bagged or bulk. Contact Ray, Private bag 76, DONALD 3480 Ph: 054-986-502.

SERVICES OFFERED

CHANNELLING OCCURS when a person allows someone from the unseen dimensions of life to speak through their body for the purpose of enlightenment. Many are familiar with Saint Germaine, Seth, Lazaris and Ramtha. Now there is 'MAFU', an Ascended Master, who gives us the ultimate truth about us, simply: 'Become again the god you once were and awaken now your unlimited powers like your brothers the Ascended Masters before you'. Live channelling sessions with Mafu are available on audio tapes. Some topics covered are: Becoming the God I Am, Opening the Pituitary Gland — the hormone flow produced is the real fountain of youth (includes a meditation to do this), How to Manifest Health and Prosperity (also includes guided meditation), People from the Inner Earth, Soulmates, Ascension — and lots more. Send SAE for list of tapes: PO Box 81, BONDI 2026. Ph: 043-331-553.

NUMEROLOGY. Personalised chart, including karmic lessons, comprehensive outlook for 1988. Not computerised. Send full name at birth (plus any changes) and date of birth. Cost \$20. R. Moss, RMB 1020, Hazelwood Estate Rd, YINNAR 3869.

LEARN TO COMMUNICATE with your Spiritual Guides and understand your personality/psychic gift order — special profile — write Gavin Greive PO Box 37, NORTH BEACH 6020. Consultants all states.

REDUCE STRESS — lose weight, feel younger, stop smoking. Dr Ann Wigmore's wheatgrass and living foods programme. Comfortable accommodation, thorough training, family atmosphere, low prices. Write or phone for free details now. Hippocrates Health Centres of Australia, 21 Monaro Rd, MUDGEERABA 4213, GOLD COAST. Ph: 075-302-860.

HOROSCOPES There's more to astrology than what you read in newspapers. 12 page computerized interpretation PLUS 10 page mini crash course in Astrology. Send \$20 by cheque/MO payable to Othmar and print date, place, time of birth and your name, phone and address. Send to Othmar 2/385 Barkly St, ELWOOD 3184.

ASTROLOGICAL READINGS — become more aware of your strengths and weaknesses. Understand what motivates and drives you. Learn how to channel your energies for positive living. Send birth date, time, place with \$15: 'Capricorn'. C/- PO ASHBOURNE 5157.

EARTH, STONE & TIMBER homes. Design and/or construction. Carpenters & masons. Fair rates. Earthform C/- PO ST ANDREWS 3761.

SOMETHING MISSING FROM LIFE? Try creative transformation meditation. Contact Megan Williams, C/- PO, BALLANDEAN 4382. Correspondence available.

THE EMERALD CIRCLE offers spiritual healing and problem solving to the less fortunate. Don't despair. SAE to PO Box 800, NOOSA HEADS 4567.

COURSES

PERMACULTURE DESIGN Course. Practical design for homes, gardens and farms. 26th September-9th October, 1988. Teacher: Lea Harrison. Guest teacher: Bill Mollison. Intensive, 12 day, on farm, residential course, in N. Eastern NSW. Includes lectures, slides, videos and practice in designing. Limited to 20 people. No previous experience necessary. Cost \$380, covers tuition, food & accommodation. Contact Lea Harrison, Stoddarts Road, TYALGUM 2484 Ph: 066-793-242.

FREE 5 LESSON health course for nutrition in a polluted world. Dr. Don Gray, C/- PO BENTLEY 2480 Ph: 066-635-213.

SPEED PAINTING two hour video shows you how to paint clouds, trees, water reflections, rocks, waterfalls, cottages, sunsets and lots more. Six paintings from start to finish. Easy to follow techniques. Amazing results. \$52 includes postage VHS or BETA. Len Hend, Box 502, MULLUMBIMBY 2482. Ph: 066-841-538.

LEARN GUITAR BY CASSETTE. This excellent beginners course will teach you to play guitar with no previous experience of music. Instruction book and cassette cover tuning, chords and solos. Compiled by top professional musicians and teachers. Cost \$25 (post free). Order from Brunswick Publications, PO Box 252, CROYDON PARK 2133.

MUDBRICK & mudbrick design workshops with Brian Woodward at Earthways, Hunter Valley. \$90 includes vegetarian meals. Send SAE to Earthways WOLLUMBI 2325.

PUBLICATIONS

SEED PRODUCTION for the Australian Home Vegetable Gardener, by Allen & Christina Barry. A book on collecting, processing & storing your own seeds. Published by the Henry Doubleday Research Association of Australia, a group of organic gardeners & farmers. \$4.00 posted from H.D.R.A. 4 North St. MOUNT COLAH 2079.

AIDS: Does Dr. Neal Blewett's 'Health Report to the Nation' give the true facts? For details write Dr. Don Gray, C/- PO BENTLEY 2480 Ph: 066-635-213.

HOW IS IT DONE? Why is it used? and many more answers given in *Psychic Information, Explanations and Management* book. Written by a practising psychic. Send \$6 and your book will be mailed to you anywhere. Print return address clearly please. J. Cohen, 8 Nelson St, BROKE 2330.

GRASS ROOTS early years to 56. \$1.50 each or \$60 the lot, including 'Early Years', 'Earth Builders Companion', 'Vegetable Gardeners Companion'. Beryl McIntosh 'Belnorry' RMB 405 TALBOT 3371.

ANIMAL FRIENDS, quarterly, the magazine for all who love animals. If you share your life with an animal friend this is the magazine for you. Regular features include veterinary column, book reviews, young people's page, lively letter pages plus factual and entertaining features. *Animal Friends* is only \$6 a year. Animal Friends, 40 Northam Rd, EAST BENTLEIGH 3165.

MAGGIE'S FARM Alternative Network Magazine. A unique experiment in Access Press run by a volunteer collective as a regular news service linking many citizen initiative groups and networks world-wide. Planet Earth news, hues and views. Eco-Action, Health and Healing, New Technology, Psychic Reality and Communal Lifestyles. 4 issue sub \$10. Maggie's Farm Media Centre, PO FAULCONBRIDGE 2776.

NATURALLY DRIED FRUIT — Make Haste Don't Waste — A book about natural sundrying of fruit using no chemicals, including recipes for using the finished product. \$9.00 posted. Helen Poyntz, 'Fosnez' RMB 1182, WOORAGEE 3747.

TEXTILE-FIBRE FORUM is the tri-annual colour magazine of the textile arts for Australia. Subscriptions in 1988 are \$15.50 which includes membership in The Australian Forum for Textile Arts (two-year subscriptions are \$30.00). Sample copy of the magazine is \$5.00, post-paid. Send to A.F.T.A. PO Box 77, University of Queensland, ST LUCIA 4067. Make cheques payable to A.F.T.A. Good information on how to make things is included.

AUSTRALASIAN HEALTH AND HEALING — Journal of alternative medicine. Australia's major health care quarterly, emphasising self healing and prevention of illness through measures which raise body defences. Sold at most newsagents and health shops \$3.50 each and by subscription \$12.50 per four issues (1 year) \$23.00 eight issues (2 years). Write Australasian Health and Healing, 29 Terrace St. KINGSCLIFF 2487.

DONKEY SOCIETY OF AUSTRALIA, for information on Magazine Subscription, Publications, Books and the Care of Donkeys. Contact: Federal Secretary, M. M. Smith, 'Warrawurra', Bushells Ridge Rd, WYEE 2259

TURKEY TALK — a bi-monthly newsletter for the small-scale turkey breeder and pure breeds fancier. Subscription \$12.00 per year. Sixth issue available now from Night Owl Publishers, Box 764, SHEPPARTON 3630.

AUSTRALASIAN SURVIVOR the magazine that prepares its readers for the fast coming hard times. \$2 for sample. PO Box 11, DICKSON 2602.

ORGANIC GROWING a quarterly magazine about growing food the natural way. Gives you practical ideas for organic gardening, farming, livestock and related subjects. Available at newsagents (\$2) or by annual subscription (\$10 Australia or \$12 overseas). PO Box 228, ULVERSTONE 7315.

SMALL FARM LIVING. Mudbrick building in the 1930's. 'Free to Climb' — short stories and poems by Elsie Pye and Barbara Kirkpatrick, illustrated. \$7 posted. Write E. Pye, 34 Beragoo Rd, GRATTAI 2850.

GRASSIFIEDS

PUBLICATIONS

AVAILABLE AT LAST 'Universal Truth and Light' from The White Brotherhood. Send for your copy now. Cost \$15 (within Aust). Write to: John James Immanuel, PO Box 632, FORTITUDE VALLEY 4006.

B. B. BULLETIN, amusing, informative, popular, monthly 50 c. FREE 2 recent copies. Send \$1 postage to Editor, B. B. Bulletin, BINALONG BAY 7216.

BACK COPIES GR 25-49, Bumper Book \$1.00 each, The Early Years \$4.00. ROSEMARY, Ph: 03-598-6239.

CLUBS AND SOCIETIES

LETS GROW GARDEN CLUB. A new correspondence club with Glen Heyne, John Mason, Graham and Sandra Ross and Mike Keelan. Benefits include: subscriptions to Garden Scene Magazine (usually \$26), quarterly newsletter, mail order catalogue, exclusive plant and seed collections, workshops, courses, tours and holidays, special discounts — books, tools, products etc. Send \$25 annual subscription to 'Lets Grow', The Garden Cottage, Malmsbury Rd, DAYLESFORD 3460.

CONTACTS

I AM 36 YEARS OLD, slim, brunette, Jewish and a teacher. I have been travelling extensively and am now ready to settle into a communal/community life, and am looking for a Jewish university graduate over thirty to share my lifestyle with. Hannalene, 28 Edward St, BONDI 2026.

LADY 52, 5'7", 8 st, fit non smoker, non drinker. Likes outdoors, sunshine, most music, crafts, swimming. Looking for honest easygoing considerate man. Age 48-55. Pref non-city living or somebody who regularly escapes. Coral, Ph: 02-525-3787.

FILIPINO/ASIAN LADY wanted for relationship/marriage by tall gent, mid forties, non smoker non drinker. Loves home and country life. Needs warm and caring woman. Photo appreciated. PO Box 703, KINGAROY 4610.

EUROPEAN MALE, 51, 186 cm, nonsmoker, social drinker, enjoys country life, travelling and sailing. I have a nice little acreage with house on waterfront in Tasmania. I wish to meet an independent, honest, loving, caring, healthy lady not involved in drugs, of suitable age for a permanent relationship. Please write with photo. Peter Bayer, C/O SCAMANDER 7215.

SINGLE DAD 39, three kids. GR dreams, rugged looks, interest everything. No vices except smoking. Looking to meet kind sincere lady. Children no objection. Where are you? C. Horton, C/- GPO, LAVINGTON 2641.

ARE YOU IN NEED of a loving permanent relationship with a sincere, nature minded man? Why not correspond with your soulmate and let it build into a lasting relationship. This is a free service. Contact Susan, New Encounters, 31 Prospect St, MACKAY 4740. Ph: 079-574-522.

SOLO DAD 38, and sons 9 and 7. We live on our own property near Ballina in a superb setting close to beach on far north coast of NSW. I have viable concrete plans for future but need happy, healthy female without hassles to share our lives and give encouragement. Kids OK. Will exchange mail and photos with all replies. We are determined to be winners but need another team member. Reply Don, 1 Ross Lane, LENNOX HEAD 2478. Ph: 066-877-663.

LADY 30 WANTS TO MOVE north to start new life. I have 2 school age children. I am into consciousness, meditation, nutrition, wholistic healing, reading and keeping fit. I have a great sense of humour. Looking for down to earth man with an open mind. Someone to exchange knowledge as we learn together. Please reply: Vic Lady, C/- Box 764, SHEPPARTON 3630.

DIVORCED MALE 43, 5'8" Cancer. Non-smoker or drinker, has farm. Wishes to meet sincere, honest lady with whom would love to share life in country. Reply: Niti, Box 1945, COFFS HARBOUR 2450.

LADY 28, nonsmoker, drinker, vegetarian. Simple living, seeks same companionship. Anyone in Qld. For friendship please write to A. Smith, 7/33 Herberton Rd, ATHERTON 4883.

CARING GUY 35, 5'6" tall, just starting GR lifestyle. Loves life, nature, but realistic about security for future. Seeks lady to share life's adventures. S. Thorne, C/- PO, STRATHFIELD SAYE 3551.

GUY 35 SCORPIO, fit attractive with two girls, 10 and 14. Live on 5 acres bush in Vic. Interests motorcycling, music, the Universe and peace. Seek attractive GR lady, companion only. Write David, Lot 2 Berrina Rd, DEREEL 3352. Ph: 053-461-442.

COUNTRY LADY OVER 40, happy, healthy, seeks country man financially secure with a love of earth, plants, animals, to help with purchase of Qld. property. You would need \$75,000, knowledge of horses helpful but not vital. If you think you are this scarce individual please reply: Mrs. Jones, 179 Mowbray Rd, WILLOUGHBY 2068.

SINGLE MALE would like to meet lady 35-40 who likes to travel. I am leaving later this year to travel our beautiful country by van. No limit on time. I wish to establish a meaningful relationship prior to departure. Please send photo and personal particulars to Ian, PO Box 174, BEENLEIGH 4207.

EDUCATED ARTISTIC LADY young 55, Virgo nonsmoker. Qld coast bush property, needs compatible helper for garden work, and company. Place for own caravan provided, power, water etc. PO Box 652, YEPPON 4703.

GIRL FRIDAY needed to share on desert island twist Auckland and Raratonga. Tropical paradise. Will be self-sufficient with goats, fish, tropical fruits. Living quarters available. Must have good medical history. Write to Robinson Crusoe, PO Box 831, COOLANGATTA 4225.

DEADLINES: GR 67 - APRIL 29TH
GR 68 - JUNE 30TH

MALE 47, 5'8' tall, would like to meet honest, trustworthy female GR person at heart for permanent companionship. I like nature, growing my own tropical fruit and vegetables, animals, chooks, fishing, sailing, living in the Whitsundays, coconut trees, islands, coral reefs and self reliant lifestyle. Bill Brook, PO Box 811, PROSERPINE 4800.

STEVEN 28, IS MISSING SOMEONE he's never met! Working in Sydney, weekends on beautiful, rough acres 2 hrs away. No great hates. Seek gentle, strong, attractive, loving woman for mutual growth. Love well mannered children. Hate blackberries a fair bit though. Looking forward, yours sincerely, Me, 333 Belmont St, ALEXANDRIA 2015.

GOOD LOOKING COUNTRY GIRL living on parents' sheep farm, like to correspond with outgoing nature loving guy between 35-40. Elisabeth Stampfli, Bernina, CAPERTEE 2846.

SINGLE MALE 28, healthy country lifestyle, good sense of humour, enjoys music, plays banjo, keen horseman. Seeking fun loving lady 20 to 30 yrs to share large house on 500 picturesque acres. Reply Peter, PO Box 12, DORRIGO 2453.

CHRISTIAN GUY (professional) who is warm, sincere, genuine, caring and honest 42 y.o. 5'7" 10 st. whose interests are medicine, country drives, bushwalking, camping, good movies and general is seeking a genuine, sincere, honest, caring, stable, Christian (Protestant) lady non-smoker under 40. Desirably living in eastern suburbs. Reply assured. Gordon, PO Box 260 FERN TREE GULLY 3156.

AUST MALE VIRGO, war pens. 64; twice recycled: led hard life & have scars & attitude to prove it; financially secure; very old fashioned about M/F relations; I need a mature, sober, open minded lady, 50/60 yrs, who would apprec. being spoiled; I am buying a caravan & intend travelling & doing whatever I fancy; my only real conditions are honesty & loyalty & a broad sense of humour. Replies Jim McCann 12 Blakesley St TEWANTIN 4565.

ARIES MALE (35) 195 cm, 90 kg, self-employed on south coast. Looking for a caring capable lady to share a country lifestyle and develop her own abilities. Alex, Box 12 BODALLA 2545.

MALE VEGETARIAN, intelligent, capable, health-conscious, enjoys good natural foods, yoga, being creative, working outdoors. Aged 35, looks younger. 175 cm tall, weight 60 kg, slim but strong, considered attractive. Naturally affectionate and caring. Living on 15 secluded acres 90 km west of Brisbane, but working in city while planning and saving towards self-sufficient farm. Seeking an intelligent young woman of similar outlook to share life. Write to Wayne Pollard, PO Box 44 ROSEWOOD 4340. Ph: 07-835-8563 from 8.30 to 4 pm.

MALE, MID 40's, fit and healthy, enjoys food, wine, cooking, travel, bushwalking, camping and sailing. Has secure professional position in a pleasant sea-side city. Seeks lasting relationship with genuine female up to 40 years. Prefer non-smoker with pleasant disposition and realistic expectations. Children acceptable. PO Box 768 WARRNAMBOOL 3280.

GRASSIFIEDS

CONTACTS

AQUARIAN MALE 31, honest, caring, into nature and alternative lifestyle, vegetarian, spiritual. Good cook and gardener. I love children, happiness and fulfilment is all I want out of life, with the right lady to share it with. I need a country life (remote area preferred) will travel. Looking for a caring lady who wants a good man around the farm. Any age. Replies please enclose date of birth. Ian Colley, C/- PO, DARWIN 5790.

AUSTRALIAN MALE, young looking 50s, educated, divorced, 5'9", is seeking a permanent lady companion to share life on a country property, inland northern NSW. I need an intelligent, well groomed, active lady in her 40s, with brown hair and full bust. Children welcome. My favourite recreations are camping, boating, barbecues, home entertaining, music and dancing. Non smoker, not religious. Please tell me your star signs. I am Taurus, moon in Cancer. I have a lot of warmth and caring to give, and am looking for a stable relationship which will last for thirty or forty years. Ian, PO Box 1366, COFFS HARBOUR 2450.

CRAFTSMAN, young looking and thinking 42, minimalist. Small cottage in rainforested mountains. Seeks younger female companion. Write David PO Box 970 AHERTON 4883.

IS THERE A LONELY, homely lady 25-40 somewhere in WA who would like to share a quiet moderately comfortable rural existence with a hardworking, artistic, caring 37 y.o. man on my few acres, one or two small children no problem. Rod, Box 285 TOODYAY 6566.

CAPRICORN MALE, 28, botanically minded, musical, arts, eastern philosophy, Pisces rising, Cancer moon. Perhaps somewhere there is a lone similar-minded Taurean woman who might like to write. PO Box 444 EL ARISH 4855.

IT'S TIME TO SETTLE, commence (or join) a small family and love with commitment. This 35 year old P/T school teacher is slim, 5'10", genuinely good looking, a little artistically and spiritually oriented, enjoys the 'finer things' including hiking/camping, reading, dining with friends, etc. Seeks a non-leftist/feminist, open-minded, tertiary educated, calmly disposed, genuinely pretty (I make no apologies) sensuous woman who loves the simple, non-materialistic country lifestyle. Please write to Greg, C/- 86 Gipps St, DRUMMOYNE 2047.

SYDNEY LADY 65 of independent means, own home, car, very fit and youthful in outlook. Seeks a long genuine relationship based on trust and warmth with an intelligent sensitive and compassionate man. Loves books, music, theatre as well as country pursuits, swimming, travelling, exploring nature. Please reply Sydney Lady, C/- Box 764, SHEPPARTON 3630.

SINGLE MALE 29 180 cm slim, desires contact with slim nature loving lady for permanent relationship. Into bushwalking, organic gardening, vegetarianism, homelife, travel, health, massage, music, smiling etc., not into tobacco, booze, religion, poisons and chemicals. Compassionate, with integrity beyond reproach, awaits soulmate for eternal bliss. Please reply Dave N., C/- PO THORA 2454.

CAPRICORN LADY 34, wishes to correspond with single (pref. Capricorn, Virgo or Taurus) male (34-44). I am honest, about 5 ft in height, medium build and never been married. My interests are health, fasting, yoga, biodynamic gardening and simple and natural lifestyle. I am looking for someone who has similar interests to mine and who is honest, non-smoker, and not into drugs. Sorry but divorced or separated guys definitely not accepted due to religion. A. Friend, 32 Williams Rd, WANGARATTA 3677.

ARIES MAN, 35, 180 cm, loves nature, animals, environment, non drinker/smoker, agnostic, into alternative energy and lifestyle. Presently living central h/lands Victoria, contemplating selling and starting new life central/northern NSW. I am peaceful, resourceful and talented. Seeking caring GR lady to share my life (either Vic or NSW). Children welcomed. Write G.T. C/- PO Box 67 DAYLESFORD 3460.

SLIM, ATTRACTIVE widow, non-smoker, happy nature, no ties. Would like to meet man aged fifty to sixty years old. Dianne 052-789-831.

POLYNESIAN gentleman, kind, sincere, from any South Pacific land sought for friendship/lasting relationship by mature lady, Irish origin. Basic Christian ideals, good living, own home, age 35-50 years. Maria C/- Box 410 BENALLA 3672.

GUY SITUATED in country near Noosa would like the company of nice lady 30's, 40's who is prepared to live-in, be looked after, assist with phone calls while I am out working. Suit someone who might like gardening, horses, peaceful living. I am genuine, easy going, no problems guy. Write Box 752, NOOSA 4567.

ATTRACTIVE INTELLIGENT 34 y.o. woman would like to meet a man who is intelligent, deep-voiced and manly, straightforward and warm, pleasant looking, strongly-built and who likes healthy living, children, animals, nature, good books and films, conversation. Write with tel. no. to Kay Smith, C/- PO, AVALON BEACH 2107.

I WOULD LIKE to contact any female who might like to share 40 acres, neat cedar cabin, close to beach. I'm 29, enjoy painting, surfing, nature. All letters welcome. G. Hall, C/- PO, ROSEDALE 4674.

INTRODUCTIONS, soulmates, friends, understanding help. Full details, SAE 'Consultus' Box 831, COOLANGATTA 4225.

HOLIDAYS

HORSE RIDING HOLIDAY down on the farm. All aspects of horse care & learning to ride. Scenic trail rides, games on horse-back or just laze about the farm, swimming, fishing, canoeing, bushwalking, picnics, hay rides, in friendly country atmosphere at Valhalla Appaloosa Stud, Falls Creek. Unaccompanied children catered for school hols, other times group bookings can be arranged. Ph: 044-478-320.

BICYCLE TOURS OF NEW ZEALAND — we feature biodynamic, organic farms and provide all cyclist's services. PO Box 11-296, AUCKLAND 5. Ph: 591-961.

GARDEN AND ORCHARD

TIGER EARTHWORMS. Fast breeding earthworms that rejuvenate your garden by aerating the soil improving water retention and naturally fertilising your garden with their castings. Full instructions sent with your order. \$18 per 1000 worms includes postage. Jenny Lewis, 11 Copson St CLONTARF 4019 Ph: 07-284-8089.

SEEDS of unusual useful plants, Asian, oriental vegies and fruits, fragrant curious novelties 50c pkt. For list send 2 x 37c stamps. L. Blaney, Wallace Rd BEACHMERE 4510.

SEED — FRUIT & NUT over 160 species offered, 100's of varieties. For list send SAE to Fruit Spirit, Botanical Gardens, DORROUGHBY 2480. Ph: 066-895-192.

SEEDLING PROTECTORS, bio degradable — non maintenance. Protect new seedlings from rabbits/hares/native browsers for under 10 cents each. S.A.E. (large) today to I.R.S. PO Box 67 BRUTHEN 3885.

COMPREHENSIVE CATALOGUE Australian native seeds: 1800 species, price \$6.00 posted. Bliss Partnership, 'The Cedars', BUNDARRA 2359.

LIVESTOCK

COMMERCIAL ANGORA bucks, forced sale, very friendly. \$40. Ph: 048-487-119. GOULBURN.

SQUABBING PIGEONS — Young birds, breeding pairs. Ph: 053-562-277.

LATE CLASSIFIEDS

MACLEAN-WOODFORD IS. 80 acres, timbered, hilly, creeks. Two BR stone house, workshop, carport, adjoins state forest, fenced two boundaries, own power and water, phone, 35 mins to Grafton, 15 to Maclean, 25 to beach. Couple divorced, must sell, \$69,000. Write Toni York, Lot 4, Richardson Rd, PARKERVILLE 6553. Ph: 09-295-4009.

SHARES IN LAND in Peria, Northland, New Zealand. Approx. 200 acre valley, ½ native bush, balance pasture. Excellent water, mild climate, road access, isolated and sheltered by state forest. \$10,000. For further information write: Clearwater Farm Co., Tekaroa Rd, R.D.3, KAITAIA, NZ.

FEMALE LIBRAN, moon in Scorpio, 47, daughter 15, recently arrived Melbourne. Currently doing post-grad. study humanities, longing to find partner for company exploring Melb and countryside. Have broad range of interests, in partic. music (classical, jazz, New Age), dining, dancing, walking, eastern philosophy and pursuing pleasure in living. Non-smoker. Vivien, C/- Box 467, HAWTHORN 3122.

NORTHERN HIGHLANDS — twentieth share in rural co-op on 600 acres, 20 km nth of Dorrig (45 mins to Bellingen, 1 hr coast). Share has 2.5 acre house site, road cut, shed, rainwater tank, young fruit trees, magnificent views of surrounding state forest and is north facing \$11,500. Contact Ben. Ph: 02-810-0558.

DEADLINES: GR 67 — APRIL 29TH
GR 68 — JUNE 30TH

GRASSIFIEDS

Please note the rate increase for the 'grassifieds'. General advertisements will now cost 30¢ per word, and property for sale will be 40¢ per word. Write your advertisement briefly and clearly — abbreviate where possible — and send with the necessary payment to 'Grassifieds', Box 764, Shepparton 3630, to arrive by the deadline for the issue in which you wish your advertisement to appear.

Sender's Name					For issue No/s.....				
.....Classification.....									
.....Postcode.....Cost.....									
Please complete the above (not for publication) — it helps us with our record-keeping so we can give you better service.									

Information Available

ST JOHN AMBULANCE AUSTRALIA

Research has shown that at least 4 Australians die needlessly every day because no one knows how to help them. What would you do if you were the first on the scene of a car accident, saw a child get burnt or heard the cries of a heart attack victim? If you're not sure how to cope with such demanding situations, a St John Ambulance course in first aid may be what you need.

Under expert tuition you can learn how to cope with heart attacks, bleeding, loss of breath, burns and other accidents, many of which occur in the home. There are a variety of St John courses to take and the fees are minimal. After 20 hours of training and a pass in the test you will be awarded a certificate which enables you to become involved in weekend work, attending various functions, and if need be, administering first aid. For more details contact your nearest St John Ambulance branch or: Sally Haw or Helen Calandro, Marchwood and Mally, 8 Collins St, MELBOURNE 3000, Ph: 03-650-2917.

TOTAL SMALL FARMS FIELD DAYS

The Tocal Small Farms Field Days will be held at C.B. Alexander Agricultural College, Tocal near Maitland, NSW, on Friday, Saturday and Sunday, May 13, 14 and 15, 1988. They are open from 9 a.m. to 5 p.m. each day and entry is \$4 for adults and \$1 for children. The field days include practical farm demonstrations and lectures, cottage craft displays and demonstrations, and commercial exhibits. Special features in 1988 will include a Good Food Promotion with cooking and preparation demonstrations, and occupational safety displays and tests. Other features include children's entertainment, farm working dog displays, and tours of historical Tocal homestead. For further information contact: Lucie Loane, PO Box 9, EAST MAITLAND 2323, Ph: 049-302-414.

BICENTENNIAL 200 SPINNING YEARS

The Grafton Fibre Craft Group are aiming to bring 200 spinners together to spin simultaneously as a Bicentennial celebration. A most exciting day of 'yarn' spinning amidst the harmony of whirring spinning wheels is anticipated. All spinners are invited to enjoy the day and to bring finished work to display or sell. The venue for this gathering of spinning talents is to be the market square at Grafton, NSW on Saturday 14th May, 1988 from 10 a.m. to 4 p.m. For further information contact: Linda — Ph: 066-425-585 or Val — Ph: 066-473-273.

PIONEER SKILLS OF AUSTRALIA ASSOCIATION

The Pioneer Skills of Australia Association — comprises people who want to preserve and promote these skills. The Association wants to demonstrate the old skills at special functions on National Trust properties throughout Australia and pass on these skills to interested people. Another project is to establish a directory of skilled pioneer crafts people, to help in organising colonial craft days in regional areas. A three day craft event is being organised for April 23, 24 and 25, 1988. The Pioneer Skills of Australia Association would like to hear from people who know how to make furniture from packing cases, make clothing, bedding and curtains from hessian bags, or kitchen ware from tins, people who can divine water, train animals for work, shear sheep with blades, or make lace or a fine damper. Anyone interested could contact Bob Hodgson on 051-551-522, association president Ralf McDonnell 03-232-9581 or secretary John Steenhuis 03-870-5054.

FARM TREES ANNUAL 1988

The Farm Trees Annual 1988 will be launched late in April and is aimed at showing Australian farmers how to get financial returns from farm trees. The articles show how to increase farm revenues through enhancing productivity of existing farm enterprises, through the conservation of soil and water resources on farms, and through the sale of tree produce. The Annual also contains reference material for further information and advice on farm trees in Australia. Contents include information on tagasaste, carob growing, how to grow electric fence timber and how to farm the native peach. The Annual is available from the editor Geoff Wilson for \$A5 inc p & p (or \$NZ6.90 inc p & p) at: PO Box 283, CAULFIELD SOUTH 3162.

9TH NATIONAL HOMEBIRTH CONFERENCE

This year Hobart is hosting the conference, to be held at the University of Tasmania from Friday 20th to Sunday 22nd of May. Meals (vegetarian) are included in the registration fees and accommodation and childcare facilities are available for early applicants. All aspects of homebirth in Australia — political and personal, social and educational, practice and theory — will be discussed by a range of expert and entertaining speakers. For registration forms (hurry!) and further information, write to: Homebirth 88, GPO Box 528F, HOBART 7001 or Ph: 002-278-640 or 002-236-415.

Feedback Link-Up Feedback

Dear Megg,

My wife and I read *Grass Roots* as often as we are able to afford it which is not often. The library here, unlike that in Maruba, does not stock it, and we enjoy it immensely.

I was interested to read the article on MANGOES by Heather Harper. You will be interested to know that the DPI at Walkamin, halfway between Maruba and Atherton have developed a mango tree that does not grow over 3 metres in height, the fruit of which, though of only medium size is quite delicious and stringless. Also, the Rainforest Nursery has done likewise.

As with all tropical fruit trees, all inward growing branches and shoots should be cut away and the crown cut away to encourage a more spreading tree, one which will not exceed 3-4 metres.

Have you ever heard of root pruning of pawpaws to discourage excessive leaf-structure and to encourage more fruit setting? If any of your readers would be interested, they can contact me and I will tell them how to do it.



**T & J Stevens
PO Box 629
CABOOLTURE 4510.**

Dear GR Readers,

Thankyou for a very interesting magazine. This is my first letter although I have been meaning to write for a while.

Would any readers know where I could buy pedigree GUINEA PIGS, particularly Dalmatian or Himalayan. Also I used to subscribe to *Stringybark and Greenhide*, folk music mag which has ceased publication. Does anyone know of any other FOLK MUSIC MAGAZINES? I'd love to hear from anyone who also loves folk (I like traditional and contemporary). I will answer all letters.

**Sonya Lang
PO Box 24
BATHURST 2795.**

Dear GR Readers,

I am trying to GET IN TOUCH with an old friend by the name of Geoff Lawson. Geoff attended Penrith High (NSW), taught in various locations in New Guinea, moved to an Aboriginal school north-west of Alice Springs and was last reported to be raising donkeys near Inverell in NSW. He married Susan Ellis who was also from his home town of Glenbrook in the Blue Mountains west of Sydney.

If anyone knows anything of the whereabouts of Geoff, I'd be grateful to have his address as we haven't seen one another for about 15 years.

**Murray Edwards
2 Vista Place
CLARE 5453.**

Dear Grass Roots Readers,

As a single female (41) I have embarked on the exciting, hard slogging, difficult, interesting, pleasurable, challenging, learning venture of building my own MUDBRICK HOME up in the Blue Mountains.

Occasionally, when I look at the project as a whole I become discouraged and nervous about the enormous task I've taken on, but then I pull myself up and remind myself that 'the journey of a thousand miles begins with a single step', and the whole journey can only be taken one step at a time anyway. Dealing with each part of the project as it arises is all I can do.

Having dealt with securing land, drawing up my own plans, having applications approved, dealing with this permit, that licence and the many fees, and having now intimate knowledge of council chambers layout, I'm up to clearing the land stage. From now on it's hard physical work with hopefully, help from friends and anyone else wanting to help.

I'm wondering does any reader have plans or ideas for an UNDERGROUND CELLAR? My idea is to use railway sleepers to line it but I have no ideas for keeping water seepage out of it. I need more ideas and would receive same gratefully.

**Johanna Blonk
Lot 60 Kent St
BULLABURRA 2784.**

Dear Grass Roots Readers,

Would anyone know the recipe for making up ALOE VERA JUICE? I find it helps my digestion, and as the plant seems easy to grow in this area, I would like to make up the drink myself. Thank you.

**Kay Hodge
'Narrarway' MS 502
SPRINGSURE 4722.**

Dear Readers,

I always enjoy reading the Feedback section most of all though I read the whole magazine cover to cover several times and then again items of interest. Last year I wrote with several enquiries and had a most wonderful response and I responded to all I think. This time I have a request for anyone who knows how to cope with MILDEW and target spot alias BLIGHT (ON TOMATOES). Mildew badly affects my cucurbits. I do endeavour to surface water though occasionally I have used a sprinkler — mornings only. I also have a type of leaf spot or mildew affect my pawpaw trees. I have never encountered such a problem with diseases since moving here 3 years ago. My garden is organic, lots of manure, seaweed, ashes, blood and bone and dolomite. At present I am considering compiling a questionnaire form and surveying numerous local gardeners. Then I'll compile it and make up a Gardeners Guide calendar for our area specifically. Even if I don't make a fortune I'm sure I'll learn a lot.

I like to bake and have a Milrite wheat grinder. I'm always interested in hearing from others who share my WHOLE WHEAT interest.

Essentially I am a Christian and I'd like to share with you a quote from *An Old Fashioned Recipe Book — An Encyclopedia of Country Living*. It is called: 'your land is a spiritual responsibility:

I believe we should live morally and spiritually as if Jesus were coming in the next five minutes, but economically and ecologically we should live as if he won't be here for 5,000 years or more. I think it is a crime against that precious heritage that God promised Abraham and the rest not to cherish and try to preserve this earth — His splendid creation. If it is going to come into destruction this should be no doing of any Christian hands. So please brothers and sisters let us struggle to preserve in health beauty and usefulness this planet that God has given us and our descendants to be our home until that last day when we shall indeed be raised to be with him. Let us be able to report our stewardship proudly' — by Carla Emery.

**Dianne Barker
C/- Mailbag
TUCABIA 2462.**

Dear Readers,

I have been searching in vain for a medium to large HAND FLOUR MILL, to share between a couple of families, and writing to *Grass Roots* seems to be our only hope. Does anyone have any information that could help in our search please? We will be most happy to hear from anyone.

**Louise Fisher
PO Box 53
DUBBO 2830**

Dear GR Readers,

I hope one of you can help me. I am the father of a beautiful little boy, now aged three, whom I cannot see. I love him very much and want to do something for him — something beautiful. I write for him and now I would like, if I can to grow a crystal for him (for when he's older).

Unfortunately I cannot get information on the process of growing your own crystal(s). Does such information exist? If anyone has any knowledge of CRYSTAL GROWING would they please write to me — all letters will be answered.

**Brad
5 Sylvander St
NTH BALWYN 3104.**

Hi Everyone,

I have just re-discovered *Grass Roots*. After picking up five back copies in a 2nd hand book store, it is like I have found an old friend. The network is great, Grassifieds, Feedback, all provide so much info. The magazine is our (Sue, Graham and Lauren 2½) link to the land.

We hope to move to a few acres in the next year (possibly down Berry way, if anyone from down that way would like to write we would love to hear from you). In particular I would love to hear from like minded MUMS AROUND ST GEORGE/SUTHERLAND SHIRE who would like to get together or write and to be able to discuss, share or maybe even start a playgroup or activities group. My interests are natural foods and childrearing, crafts, organic farming, continuum concept, nature cures and alternative education. Would love to receive letters from anyone willing to write. Also does anyone know of any ALTERNATIVE SCHOOLS south of Wollongong way?

**Suzanne Howarth
C/- 5th Floor
12-14 Ormonde Pde
HURSTVILLE 2220.**

Feedback Link-Up Feedback

Hello Again,

Well, we are still 4, soon to be 5, but I felt I must write again as our plans have changed. For various reasons which would be a bit lengthy to explain, we are staying put in Adelaide, though we will continue to live in the hills where the air is somewhat cleaner. I have investigated the Steiner school in Mt Barker and I get the impression that after the subtle veneer is removed, it is quite similar to any state school. This may provoke an angry response from Steiner devotees, but all I can say is live and let live. Still calling for more people doing or interested in PRIMAL THERAPY, particularly in Adelaide. I have had one letter so far — surely there must be more of us! Please write or call. Some more answers, all to people in GR 64.

Barb Catley — NETTLE STINGS can be rubbed with crushed dock or aloe vera (fresh).

Roslyn Adcock — LEAF CURL is well treated by throwing numerous fresh marshmallow plants up among the affected leaves, also grow it around the tree.

Wendy Black — I don't feed my CHOOKS layers pellets, they get whole grain (oats, rye, or screenings) soaked in hot water for a few hours, alternated with a hot mash of mixed bran flakes and wheat germ, also any kitchen scraps.

Skye Brownfield — a remedy for HEADACHES: try Nature's Spirit Hypericum Oint, or rosemary oil and possible more sleep and a change of diet, lots of raw food.

Melanie Halliday — recipe for a VEGIE BURGER:

2 cups cooked lentils (red and brown)

1 cup cooked rice

1 large onion, finely chopped

1 large tomato, finely chopped

2 eggs, beaten

wheatgerm to make a stiff mixture suitable for patties

Mix all ingredients together with 1 tsp of basil (or other herb). Make balls and cook in frypan in butter or vegie oil. Serve with homemade chutney or mustard pickles or tomato sauce and fresh salad — delicious!

Still putting out a call for the whereabouts of Dennis Franklin. I have also been thinking of setting up a HOMEBIRTH support group. I have a video of Jason's and Taja's births which I am willing to share as I know lots of women have never seen a birth and have no idea what to expect. If anyone is interested in being a part of this group or has experiences, photos or film to share, please write or call. The more the merrier, and maybe we can do our bit to move the rights of mothers, fathers and their babies on a bit faster. Is there anyone who has a plan for a simple, cheap, easy to make SAWMILL? Well, this seems to be turning into another long letter so I will close — oh, one last thing. Are there any MIDWIVES, lay or certified, in SA (preferably near Adelaide) who would like a trainee in a couple of years' time? If so, please get in touch.

Jancy

C/- PO

SUMMERTOWN 5141

Ph: 08-390-1502.

Dear GR Staff,

For ages now I have been trying to actually put into words just what it is that makes your publication so thoroughly readable and enjoyable (for me at any rate) and at last I think I have 'got it together'. It is the fact that GRASS ROOTS MAGAZINE brings to mind that feeling of camaraderie reminiscent of a bygone laid back age when just about everyone was a 'battler' so consequently went out of their way to show a little tolerance and kindness to each other regardless of one's private beliefs or convictions. A time when if things were extra tough for one, others rallied from miles to give a helping hand. An age when country folk lent their time and harvesting implements to one another in their respective areas so one and all had their winter stock feed safely in the barn before the weather 'cracked up' again. (Speed is of the essence here in Tassie owing to the unpredictable nature of the weather.) While men and boys were busy in the paddocks wives and daughters were preparing lashings of food to feed the hungry hordes and brought on site fresh salads, cold poultry, (home killed and dressed, naturally) gooseberry, cherry or apple pie with cream fresh from the dairy. Suffice to say, here is one who is grateful for the spirit of goodwill your magazine generates and if good wishes aid the running of such a publication please feel free to take a truckload when necessary.

George Lee
91 George St
DEVONPORT 7310.

Hi Everybody,

It's been a while since I last wrote (2 years). Since then we have grown from the 3 of us to 5. Just recently when we were doing our fruit and vegie shopping we saw some COCONUTS that had started to grow. As we will be buying our own patch of land this year we thought that we would try to grow one, but we don't know how to go about it. So if anyone knows anything about growing coconut palms we would greatly appreciate it if you would share your knowledge with us. Also does anyone know how to pick the DATES from a date palm and how to tell if it is a true date palm or if it is an ornamental palm? Well I had better go now as my three little girls are demolishing the lounge room. God bless you all and keep up the good work.

Rosemary & Clive Turner
32 Renshaw St
GOULBURN 2580.

Coconuts are very easy to grow in the coastal tropics according to Ron Edwards in his book 'Going Tropical'. A nut left on the ground will generally sprout and send down a root. The ensuing seedling grows more slowly inland than in the coastal tropics.

Fruit first appears after the seventh year with its characteristic trunk occurring after several years' growth. 'Going Tropical' of course was published by Night Owl and costs \$15.50 posted. If readers have more information on growing coconuts and even date palms we would love to know so we can make it available to everyone.

Dear Megg,

I have just been reading your thoughts in Gumnut Gossip about unsolicited mail to contributors of Feedback and would like to offer my feelings on this.

We are bombarded with unsolicited advice all our life, people pushing their opinions, junk mail, billboards that catch our eyes and at the moment our TV's are showing advertisements for two major political parties which I don't encourage people to adhere to, so I switch off my mind or go to other thoughts for a few moments.

I don't hold with pornography being sent to the teenager from Pen Pals and can empathise with the shock of his parents and the embarrassment to yourself, but your responsibility ceases once the distributor takes over.

You and Kath and your team compile a very good magazine which is keeping like-minded people informed and should continue to publish names and addresses, so we can make private contact.

I enjoyed your article on *Purebred Poultry* which took me back to my childhood where eggs were 1/11 d a dozen. It always fell to me to take the dozen to the local housewives, with a penny in my pocket as change for when they offered 2/-. The 'egg money', a term I haven't heard for over thirty years, was kept in a chocolate tin on top of my parent's wardrobe and often got my mother out of tight situations when the pay my father earned didn't stretch far enough. We were too poor to have a dog or cat so my younger sister had a pure white rooster, which was there to fertilise the eggs (a good selling point), as her pet and named him Sweetie Pie. He was vicious to everybody but her and sank his spur into my leg where there is still a dimple scar today. Our eggs were also popular because Mum used to let the hens out onto the grass, which when ingested made the yolks yellow.

You have a good product in *Grass Roots*. Just rely on the common sense of your readers to handle these matters themselves — they are inventive enough to reverse any situation. Hope my comments have helped.

Gerard Kelly
12 Yerinbool Ct
ARANA HILLS 4054.

Dear Grass Rooters,

I would be interested to hear from anyone who has had experiences with NATURAL BIRTH CONTROL METHODS, successful or not so. I have had two babies within one year, both conceived while using Billings and natural rhythm. I hope to have a break from childbearing for a while, giving my energies to breastfeeding, caring and yoga, with hopefully time to potter about in the garden.

Also if anyone knows how to make an astrological sex chart for contraception from birthdate, or where I could get hold of one, I would be thrilled to hear from you.

Lucy
RSD 363
LIFFEY VALLEY 7302.

Feedback Link-Up Feedback

Dear Grassrooters,

I have decided to put pen to paper after reading so many of your letters in this section. I am at present living in a 3 bedroom cottage in a small country town in SA with my wife and 3 sons. We are going to start building our dream home on our 4 acre block at Clare soon. It is going to be made of Cinvla blocks — earth and cement. I had better start from the beginning as that is mainly why I am writing.

I had an accident at work shortly after purchasing a 3 bedroom home in Adelaide. We had a mortgage with the State Bank. After recovering from the accident my firm sacked me and then came 3 years of UNEMPLOYMENT struggling to make ends meet, but managing thanks to my father introducing me to a BUDGET. I am still unemployed as I have had a bad back and employers won't take me on, I do however manage to get some casual work. Anyway after 3 years of being unemployed we came across *Grass Roots* and decided the country life was for us. We went looking for our piece of country here. I will point out we talked long and hard about this and decided that it must be done in stages.

Step one was to find a small rundown cottage to work on and renovate with the intention of selling in a year to make some more money to then enable us to purchase some land. Well our house in Adelaide sold and we had sufficient money left after paying off our mortgage to purchase freehold a little cottage in a small country town, cost \$14,000. We then proceeded to renovate, paint, strip wood etc., cost of renovations \$1800, total cost \$15,800. We would have been happy to stay here but decided to carry on, so we looked around again and found a little rundown place about 60 km away. 25 acres with an old prefab house, rainwater tank and shed \$28,000. We sold the cottage, paid for the land and had \$3000 left for an immediate start on renovations, which we did.

We had a wonderful time on this property, we had pigs, milk cow, calves, chickens, geese and goats. We improved the place by adding pigpens, cow shed, milking machine, chook shed and run, we ran a pipe line 2 km to obtain mains water. Hooray! Previously water was carted, apart from the little rain we collected. We'd just about done everything we wanted when disaster — fire! Let me tell you two in the morning trying to fight fire with no water is no fun — our mains supply had melted. We had black polypipe above ground under the house, never again — galvanised or copper in case of a fire, polypipe is fine underground. Anyway the insurance company replaced the house and things got relatively back to normal. We learnt a lot of lessons here — take note future grassrooters of the following. What we thought was perfect land, 25 acres was dry, sandy soil, rainfall 320 mm, no mains until we had it connected, and then only after prolonged red tape battle with E & WS Dept, we were very lucky to have got it connected at all! So beware: water is very important. We had oats planted, with very poor results. We ended up buying in all our feed for the animals and found we couldn't keep up with the weeds on 25 acres unless you buy machinery to work it which wouldn't really pay, so we didn't. With that we decided to sell and buy a smaller place.

So all you just starting out, stop and think. Don't look through rose coloured glasses, it's better to have 1-4 acres and be able to look after it and work it well than to have 25 or more acres out of control. Make sure your intended place has water, reasonable rainfall etc. Well, we sold and have bought another cottage for renovation and a 4 acre block in Clare, rainfall 700 mm and have had a 2.5 million litre dam put in and a bore sunk. Ground water is very good here so our water supply is assured, we have power and have levelled our house site, soil test done, plans drawn and we begin making our bricks next month for our 3 bedroom, soil/cement block house. When we finish this we will sell our little cottage and move into the new house. All this going on plus my casual bus driving, keeps us busy! Well, that's something for you to think about. As I said we have found the ideal size block to be about 4-5 acres. Some may disagree.

My last info: most of you are probably scratching your head by now thinking, how does he manage all this on only casual work and the rotten dole? Well, I gave up smoking; I gave up drinking; we gave up going anywhere that costs money; most important of all is our budget. We allow \$100 per fortnight for food, \$30 per fortnight for petrol and then work the bills out and put aside enough to cover them and save the rest. Achieving anything worthwhile takes sacrifices. As far as keeping the shopping bills down only buy essential items; for example at present we buy milk, bread, cheese, margarine, meat, vegies, cordial, tea, sugar, Vegemite, porridge, Weetbix, flour, no canned or bottled foods — too costly, buy fresh. Of course when we get back on our land we won't have to buy anything except toiletries as we can supply all the other items, but

as I said we are at present in a little town so buy in our food but still manage to budget very well. Well I hope you gain something from this letter. My closing thought. I live by my code — do only unto others what you would have done to you — and you can be assured you are living life right.

K. Lee

BRINKWORTH 5464.

Dear Megg & GR Friends,

I thought I would drop a few lines to let people know where we are and how we are. After such a bad experience share-farming we spent 8 months in Rockhampton searching for work. We were unsuccessful. So Pete, son and friend went to NSW to look for a reasonably priced rented farm but after 6 long weeks came back very disappointed. Living on the dole, paying high rent, we knew we had to move on because we could hardly make ends meet. We decided on MT ISA, a place far away from where we wanted to live but which had plenty of work opportunities, so once again we packed up our little belongings and moved on. We arrived on Friday evening and were too late to apply for a counter cheque, so we slept out bush till the Monday morning. We got our cheque, and settled into a broken down flat. We were feeling disappointed with life but still kept hanging in there. We applied for many positions and finally we all found some type of work, especially myself, I have an excellent position.

We have so many WONDERFUL PEOPLE to thank because without their help we would never have survived. There were so many times we had no food, money or a roof over our heads, but through their generosity and kindness they gave us hope.

God bless and much love to you all, and remember although times seem so bad, only good can come out of it. There were many times I needed a friend, so if anyone needs someone to write to and is lonely please drop me a line.

Marj Gronemyer

Flat 2/33 Transmission St
MT ISA 4825.

We're sure readers will share our pleasure in hearing that at last things are starting to go well for Marj and her family. After their recent difficulties (GR 61, p. 87), it's wonderful to receive such a positive and hopeful letter about their progress. We all wish them well.

Hi Everybody,

Just thought I'd drop you a line. I might be pretty young to be writing to Feedback — I'm 13. I think everyone involved in self-sufficiency is great, keep up the good work.

I don't know of any newsgroups right now who have GR, so my only way of reading it is through the library. Any answers forwarded to me would be really great.

Firstly — has anybody a natural remedy for DERMATITIS? My mother gets it on the back of her hands and legs. Secondly — how is everybody going with NO-DIG GARDENING — I'd love some advice. Thirdly — what about feeding GARLIC etc to cats? Help needed about this!

Finally, if anybody around my age or any age would like to write to me I would love it. I like calligraphy, music, dancing, crafts, horses (we breed Arabs), cats and herbs/organic gardening.

Melinda Phillips
2 Threlkeld Dr
CATTAL 2756.



Dear Megg,

In *The Early Years* there is an article on CHERRY BUTTER CHURNS. Could you please advise if these are still available or, if not, where I may be able to obtain an alternative one.

Megan Williams

C/- PO
BALLANDEAN 4382.

As you have found, butter churns are rather like hens' teeth, however we have located a source in Victoria. There may well be a supplier in NSW which would be closer, but don't know of any yet. The Rural Store, Lowdens Rd, KILMORE 3601, 057-821-118 have one for \$107 plus postage. It is made from wood but is not a Cherry churn as they were phased out of the market in the late 60's.

Feedback Link-Up Feedback

Dear Grass Roots Readers,

I would like to reassure Alice Grigg that her concerns over MEAT EATING CHRISTIANS are unfounded. It's up to each person to choose whatever course is most appropriate for them. In Mark 7:18-19 Jesus himself tells the people — 'Don't you see that nothing that enters a man from the outside can make him 'unclean'? For it doesn't go into his heart but into his stomach, and then out of his body.' (In saying this, Jesus declared all foods 'clean'.)

If that was not enough, the whole of Romans 14 is devoted to this subject. Verses 2 and 3 tell us 'One man's faith allows him to eat everything, but another man, whose faith is weak, eats only vegetables. The man who eats everything must not look down on him who does not, and the man who does not eat everything must not condemn the man who does'. Paul says in verse 14, 'As one who is in the Lord Jesus, I am fully convinced that no food is unclean in itself. But if anyone regards something as unclean, then for him it is unclean'.

So there's the answer, straight from the great guidebook, which in some mystical way, gives us the answer to anything over which we are puzzled or unsure of. Best wishes to all readers.

Wendy Purvis
10 Northumberland St
MARYVILLE 2293.

Dear Readers,

Would some kind GR person please write an article via *Grass Roots* and explain the DIFFERENCES between all the LIMES e.g. quick lime, slaked lime, burnt lime, etc and please advise of their individual uses. I have asked several people and judging by their answers an article on this subject would be appreciated by all.

Hylda Bracewell
TORRINGTON 2371.

Dear Grass Roots Folks,

I was interested to read your various articles on CRAFTS in GR 63. I sympathise with Jim Timings of New Zealand who experiences the frustration of many very competent and skilled craftspersons in that he is finding difficulty in marketing his goods. The people selling 'little frilly gingham bags and stuffed toys', such as myself, do quite well as he bemoans, for which I do not apologise. All my pretty little bits and pieces are readily received at all markets I attend because they are inexpensive and attractive. I also sell through a number of stores which have a good turnover. Most people go to markets to buy something and are frankly unable to afford many of the very beautifully and expertly handcrafted items that 'real' craftspeople make.

I may be no expert but find craft work instructions found in magazines and books useful, and they can usually be varied. I believe my crafts, and I reserve the right to call them such, fulfill a marketable need on a much wider range than highly skilled work. Incidentally, I have nothing but admiration for the beautiful work Mr. Timings creates, but feel he should not knock or begrudge sales made by others who may not possess his fine skill and expertise.

Anne Mayne
NEWPORT 2106.

Dear GR Readers,

Well I wonder if any of you have had the same feelings as I did when I finally MADE THE BREAK from security and comfort to very spartan living as my house gets built to lock-up stage. It's just a matter of adjustment I keep telling myself; it's worth it in the long run. I'm fortunate enough to own 20 acres in central Vic. surrounded by bush and hills, far enough out of town to be secluded but close enough to travel in to work each day.

Steve Thorne
C/- PO
STRATHFIELDSAYE 3551.

Dear Grass Roots Readers,

Especially those in Griffith, NSW. Don't kid me, I know you're there! I've seen *Grass Roots* disappearing off the newsagent's shelf. I have only been in GRIFFITH a few months, so you probably don't know me, but there's no time like now to make new friends. I've just moved to a farm house 10 km from town and am planning a vegie and herb garden, and maybe some chooks, so any hints would be great. Look forward to meeting you soon.

Frances Tonks
C/- PO Box 493
GRIFFITH 2680.

Dear Grass Roots,

We saw the SOLAR DRIER in Dec *Grass Roots*; the only query we have — the use of polystyrene. In our original solar cooker we used polystyrene and discovered it gives out toxic fumes, and does 'melt'. We are going to make a drier when we've got the pig inseminated, increased our chook numbers, got the methane gas digesters working and some windows in the bathroom. We find that in the West January and February are the worst couple of months, heat-wise, in the year, but having RAMMED EARTH walls the house keeps cool. The highest temperature since we've been here was 28°C, after nearly a week of high 30°C's.

Pauline and John
C/- Box 764
SHEPPARTON 3630.

Dear Megg, David and Readers,

I am an accountant living in the western suburbs of Sydney. My husband works for the Dept of Agriculture. We have half an acre and grow vegetables and native trees. I keep bees and together we have managed to attract a few native birds to our garden. I would like to extend an invitation to *Grass Roots* readers living in the country, to stay with us, or drop in when in our neighbourhood. I would also like to correspond with any BEEKEEPERS.

Narelle Davis
2 West St

BLACKTOWN 2148.

Dear GR,

Just a few comments on recent letters.

For Graham and Deryn of Kallangur, re your problem of WILD DOGS KILLING your goats: 1080 is trouble, as it kills everything including birds and cattle; we used it once and learnt not to use it — other properties here have done the same.

Now, I would put little bells on your goats as a starter. Next time they kill a goat, bait it with strychnine. Just sprinkle in the cut made by the dogs and leave the goat there (the volume or size of 2 match heads is enough strychnine to kill a dog). There's a lot of chance the dingoes will come back the following night. If it is wild dogs, you might have a problem, but try the bait anyway; it might work. Sometimes wild dogs (feral dogs) kill for the fun of it, and are very hard to get as they know the ways of men.

Trapping needs great skill, or you can try shooting if you are a good shot, as if you miss they will sneak in and be twice as shy and cunning and clean your goat herd up. I do not have trouble with dingoes as I do not kill wild pigs, and the dingoes feed on the young ones, but I've got a lot of trouble with domestic dogs gone wild, I've got many cows without ears and torn udders. I know that in Europe mules and donkeys running with mares and foals will protect the foals against dogs and wolves.

For Margaret Gease of Billimari, re GOATS MILK CHEESE: we used to make 'bicots' (goat cheese) this way, you can make the same with cows milk.

Put your milk in an earthenware 2 or 3 gallon pot, glassed inside, and send the milk sour. We used to buy 'pressure' at the grocery stores — it was brown like flat beer, and came from the stomach of calves, but I think junket, or a few drops of lemon juice would do the same thing. Next day the blue milk will be on the bottom and the curdle will be on top.

Now as you cannot buy cheese moulds in Australia, I would make moulds out of small plastic yoghurt containers and drill holes in them with a hot wire, so that the blue milk can drain out. Then get a baking dish, 2 or 3 inches deep, and put a bit of mesh over it (old fridge shelves would be A1). Put your moulds on it — the cheese will drain and the blue milk will go into the dish underneath.

You can get the curd from the earthenware pot with a flat slotted spoon and fill your moulds. It will settle but you keep filling your moulds up. When they are set, you turn your moulds over a little straw mat (a tea towel will do) and you've got cheese.

You can eat them or let them dry in a flyproof meat safe in a ventilated place. We had a pulley under the awning and we used to pull the safe up there.

They can get very hard and squeak when you cut them; they also will be a lot smaller as they shrink and get bitter. You can keep them for ages in a wooden box, with a bed of wood ashes, 1 layer of grape leaves, the cheese, more grape leaves and more ashes.

The blue milk which is green is used to feed little pigs and little humans. The result, is the same — they stop squealing!

Mike Bredillet
Bald Hills Station
COOKTOWN 4871.

Feedback Link-Up Feedback

Dear GR Readers,

I am writing in reply to the letter by Mark and Jacinta Young regarding **WASHING USING A COPPER**. In reply to their query, I have used a copper for years, and I find it difficult to understand problems with them, since they are so simple.

An electric washing machine violently agitates clothes for perhaps 20 minutes as a means of cleaning them. In the case of a copper, a fire is lit beneath and relatively gentle convection currents continue for 12 hours or so. I bring the copper to the boil and allow to stand overnight. It takes at the most a few minutes to gather some twigs and leaves to start the fire, and a surprisingly small amount of wooden litter to boil the copper. Many artificial textiles and dyes won't take boiling, but I am content to use only what will.

Very little soap is required with a copper — I rinse in a bathtub set at chest height. Machine washing gives a satisfying illusion of cleanliness, but that is all it is as anyone will discover who rewashes spun dry clothes. Coppers were almost universal a few decades ago — it's surprising how quickly knowledge of them has disappeared. They certainly don't fit into the modern industrialised lifestyle, but for those people who don't mind wasting a bit of precious time on a different approach to life they are perhaps worthy of consideration.

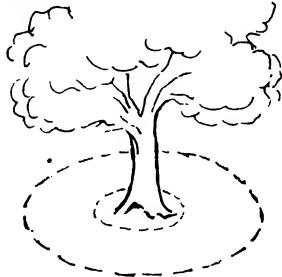
**Doug Wynter
PO Box 46
FRANKLIN 7113.**

Dear Robyn Adcock,

Re your letter in GR 64, your **APRICOT TREE** sounds like it is lacking in **MAGNESIUM**, I guess fruit trees in the south have the same symptoms as fruit trees in the north. If a fruit tree continues to flower and is unable to set fruit, and/or the leaves are yellow or the leaves tend to curl, it generally means that the tree is lacking in some trace elements, and magnesium. Most of these can be obtained from a good feed of dolomite. What I do is to chip a shallow trench, say 4 or 5 inches wide and a couple of inches deep, around the drip-line of your tree, and be very liberal with the dolomite, say about a cup full to 10 or 12 inches of trench. While you have the trench open you can give it a small amount of Q5 unless you prefer to use natural fertilisers. In that case still use the dolomite, and some animal manure, cover in the trench by replacing the turf you removed and water it in every day for a week, then watch for the changes in your tree. This applies to all fruit trees.

Now to give your tree a quick boost of magnesium buy a couple of packets of **EPSOM SALTS**, sprinkle it around under your tree right out to the drip line and water it in. This will give your tree an immediate boost of magnesium, though this does not last, as it leaches away very quickly. The tree can use it immediately, where dolomite is a longterm feed and should be fed to your trees at least once a year. **NEVER** put mulch or fertiliser close to the trunk of your trees, always keep 8 or 10 in at least clean and clear to keep off ants and fungus.

Happy gardening Robyn.



The drip line is around the outer edge of the tree overhang, or shade line, when the sun is directly above the tree.

**Dawn Meneikys
PO Box 31
MOSSMAN 4873.**

Dear GR People,

I have recently been introduced to this magazine by a fellow reader and like everyone else have only good comments for it. Great, fantastic, intelligent! I'm doing my HSC this year then will be going on to do nursing. I do not wish to do nursing all my life but would like to own and run a small hobby farm and bring up my children in a smog and pollution free environment. That's my life plan. Now I was wondering if anyone does not use **SHAMPOO** for their hair but some other natural product. I would be eternally grateful if someone could send me a recipe or something. Thank you again for having a magazine that treats you as a human being.

**Yvonne Woodbridge
5 Cameron Rd
ESSENDON 3040.**

Dear David, Megg and all at GR,

Just a note to update the article which appeared in February edition *Grass Roots*. Christopher is now 2½ years old and thriving and we have all been blessed yet again by the arrival of little Bryan James, born 5.10.87, 6 lb 7½ oz and 19 in long. He is now 4 months old and eating solids, but I cook for him like I did for Christopher, so we don't buy commercial baby food much. I don't like the look of the stuff anyhow, and I don't believe in feeding the kids something I wouldn't eat myself.

We are managing to survive well on a low income by buying homebrand groceries, cheap cuts of meat (we eat much less meat and more vegies that we used to). I buy cheap fabric to make clothes for the boys, cheap wool to knit their jumpers, and I'm investing in things like hair cutting implements, a yoghurt maker (non-electric) and things like that so that I can do as much as possible myself. That's about all I have to add at this stage.



**Vicki Judd
5 Hakeville Ave
NUNAWADING 3131.**

Dear GR,

I would like to relate my experiences in setting up my own **HOME LIGHTING and POWER SYSTEM** as I think it would be of benefit to others who have similar ideas.

There is no doubt that if you can connect to the state electricity grid for a reasonable cost it will provide you with cheaper more convenient energy than you can produce yourself, unless perhaps you only want to supply a weekend shack with a few lights. When we first moved here S.E.C. electricity was out of the question, but more people are now in the valley and the cost of connection divided between us was quite reasonable, so we are making the change to mains power.

We have no wind or water suitable for electricity production and if you want to run electric motors or power tools or even washing machines from solar power you had better have a very healthy bank balance to buy the equipment needed. The sun might provide free energy but good batteries cost a fortune and they have a limited life. Invest the money you would like to spend on your solar system and with the income buy diesel and you'll be awash with enough fuel to provide more energy than your solar system would.

The main problem with producing electricity from a diesel genset is that the cost of operating a low power requirement will not be one tenth of the cost of operating at full load, it will be much more because of your maintenance and depreciation costs, as diesels do not like being lightly loaded, their bores glaze up and they wear out faster. To alleviate this problem I had a large capacity battery charger charging a set of deep cycle 12 volt batteries whenever the motor was running, to provide power for the washing machine, pumping water, power tools, etc. When the batteries were fully charged and the power requirements were low we stopped the motor, blissful silence returned to the forest, and we drew our power from the batteries via an inverter which powered the lights, stereo, TV and small appliances. Lights were available throughout the night for emergencies and with sensible battery power use, it reduced the motor operating time and cost by half.

The size of your system depends on your requirements and finances but our 4 KVA Lister has the capacity to operate a small electric welder and electric induction motors up to 1 H.P. The battery charger must be able to put high amps into the batteries quickly to stop the motor running for too long, thus defeating the purpose. The batteries must be deep cycle batteries, if you want them to last. Ours are Besco 6V 230 A/h golf cart batteries. Our inverter has a 12V input and a 240V 450 watt output. Self Sufficiency Supplies in Kempsey NSW, Ph: 065-627-704, are very helpful and have a catalogue to quicken the pulse of any alternative energy freak.

Wishing you courage and determination in your endeavours.

**Hal Levison
PO DWELLINGUP 6213.**

Dear GR Readers,

Would anyone be able to help me with a recipe for making my own **APPLE CIDER VINEGAR**? I have read the latest GR mag, but I would appreciate any other information on **DRYING FOOD**, if anyone has any other handy hints. Thanks for a very interesting and helpful magazine.

**Debbie Scott
PO Box 759
ARCHERFIELD 4108.**



gumnut gossip

Megg Miller.



We've all been asked at different times what it's like working in publishing when the business is not only miles from a large town but also from the capital city where this field of work would generally be found. Our responses of course vary. Some weeks the answer would be an enthusiastic 'wonderful' — a pleasant drive to work along quiet country roads, fresh air, pretty chickens and calves to admire and regular little outdoor jaunts to visit the loo which also include a pat of the beguiling kittens and a word to the parading geese or turkeys. Other weeks though you would only receive grunts or a sigh and then you would know it's a real pain in the neck. Maybe it has rained all week and a boat is required to ferry people from cars to the office or perhaps an urgent delivery of developing chemicals hasn't arrived because the delivery van lost its way along the side roads. These last few weeks there have been many grunts and sighs because dust churned up by the feet of the many gallinaceous species that roam here has drifted into the office and settled on equipment designed for a plush, temperature controlled environment. The result — more hiccups for the typesetter and a breakdown by the computer's hard disk. This resulted in trips to Melbourne and days of anxious waiting during our busy period until repairs could be carried out. Then to top it all off a truck laden with farm machinery cut a corner and brought down a power line, leaving us in the dark for a whole day just before we were due to meet our first deadline. You just can't win, can you!

Ironically I'd been asked only a day or so before by a fellow publisher in Melbourne whether we actually ever met our deadlines and I'd had to admit no, we were usually a few days out. This issue we had decided *it would be met* and had brought the two deadlines forward (the magazine is printed in two sections) to try and avoid holdups around Easter. We've not gone too badly but the personal wear and tear has been considerable.

With the computer out Anna has had to keyboard in most of the material, a daunting task. Normally it would have been typed into the computer by one of our casual workers, a printout run off and then checked for errors, the corrections typed in and then the lot electronically sent to the typesetter, where with a minimum of effort on Anna's part it is put into the familiar column format and then run off. Obviously if the one person has to type in all the Feedback and many of the articles it's a mammoth task and Anna is justified in complaining about her blunted finger tips. She has done a terrific job and deserves special acknowledgement for it.

You will have noticed our GR Survey on pages 49-50. We would like as many people as possible to fill it in and share their ideas and suggestions with us. As mentioned last issue we would really like feedback on the suitability of the material we present and an indication of interest areas for the future. We also hope to gain an idea of the response readers have when they send in or answer letters or grassifieds. The type of response, or lack of it is troubling us at the moment. One reader has written in complaining of the lack of courtesy after having sent out a number of letters containing SAE's and receiving no replies whilst another was inundated with a lot of 'weirdo mail'. People with sad lives and twisted attitudes are treating some GR contributors as fair game and sending upsetting pornographic or quasi religious material. We don't know to what extent this is happening so hope those affected will advise us via the survey. We can't promise to solve these tricky problems but we may be able to protect or warn potential victims in the future. Hopefully we will be able to present the survey results in the next issue.

We have a disappointing announcement to make about our Book News, a section that we've included for over thirty issues. We'd made a valiant effort the last few years to offer a service to readers whereby they could purchase books by mail at a reasonable price.

We've found it increasingly difficult to do so for two reasons. Freight and handling charges have become prohibitive and if we really charged what it costs us to stock the books none of our readers would be able to afford them. Secondly, many of the books that interest GR readers come from overseas and are associated with considerable waiting periods whilst often those produced locally come from small print runs and publishers don't always want to reprint, or wait a considerable time before doing so. It has boiled down to poor service on our part despite considerable time and effort. So reluctantly, we're now phasing out the direct mailing of books from the Book News and will just offer our few Night Owl titles. We still have books on the shelves at reduced prices and if anyone is interested they should send in a SAE to Kath for details.

Because books are such a valuable source of information and because they cost so much we've decided to include a regular page called Recent Releases which will list new titles appropriate to the GR lifestyle. Details of author, publisher and distributor if applicable will be given so you can order books through your local bookseller.

One feature unique to GR is the number of readers over 70 who not only enjoy the mag but actively use the information it provides. My own father puts in a day in the garden that would make the average 30 year old blanch, and last year I was privileged to stay with Jean and Harry Clark whose article 'Living Harmoniously' appeared in the *Bumper Book*. Although late starters, they've managed in ten years to establish on their five acres native trees abounding in wildlife and vegie, herb and flower gardens, as well as find time to bake bread, make soap and a range of handcrafts. Phew! Another 'doer' is Iriss Quigley whose note I included in this page a few issues back saying that maybe she should learn to knit but she was leaving it for her old age! It's wonderful to know that the self-sufficiency subculture is not shackled to the mainstream preoccupation with youth and that for most of us the upper age readers are truly golden oldies — rich from the experiences of over three quarters of a century of living and endowed with hard won gifts of knowledge, wisdom, and peaceful acceptance.

Next issue we will feature an article by Iriss on 'Living in the 80's'. It's written with much humour and understanding and I know you will enjoy it and find yourself reassessing your attitudes to mature age friends and family. Iriss particularly wanted me to mention that she is not suffering a recurrence of cancer as previously thought, but seems to have some malfunction associated with her heart. She wanted this clarified so people considering alternative therapies like she followed will not be mistakenly discouraged. Good health Iriss and may this your 81st year be your best ever.

Thumbing through copies of GR as I do regularly, any copies really, I'm always struck by the variety of activities readers seem to fit into their lives. Whether they are Feedback contributors or GR writers like Jean, Harry and Iriss, they appear to combine a wide range of interests as well as being involved in areas of self-sufficiency. My life and David's are so close to overflowing it's almost dangerous and the GR staff here juggle family life and a committed job with personal interests and hobbies. How do we do it, and how do you all manage? Or should I ask, what don't we do? I think I may have found the answer in a newsletter recently. Briefly titled 'jobs to do', it goes like this . . .

Get all chooks out of kitchen.

Run grass rake over carpets.

Put the bucketful of used cutlery through cement mixer.

Put dirty plates in duck pond — bring back the last lot.

Find pitchfork, in case cobwebs need doing.

Decide whether to wash clothes, or compost this lot too.

More Great Night Owl Books



Communicating With Nature

Michael J. Roads

144pp \$9.50 post paid

This book shows us how we can work better with nature in a more direct and spiritual way. A book for the new farmer, conservationist and dedicated gardener.

The Householders' Compendium

John Meredith

210pp \$10.50 post paid

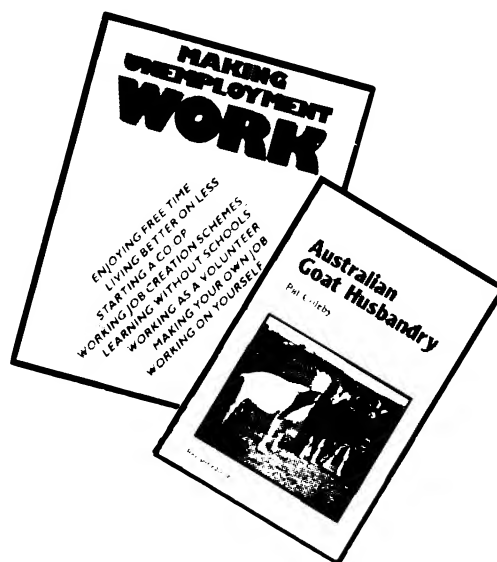
Consult this book for new ideas on family meals, what to do with seasonal gluts of fruit, how to make insect repellent, cure warts and more. A valuable source of information on being self-sufficient in a pre-packaged world.

Making Unemployment Work

Cheryl Paul

160pp NOW ONLY \$9.50 post paid

This is an informative and inspiring account of how to make the most of your time while unemployed. It is a practical and positive discussion of the issues and options available to unemployed people.

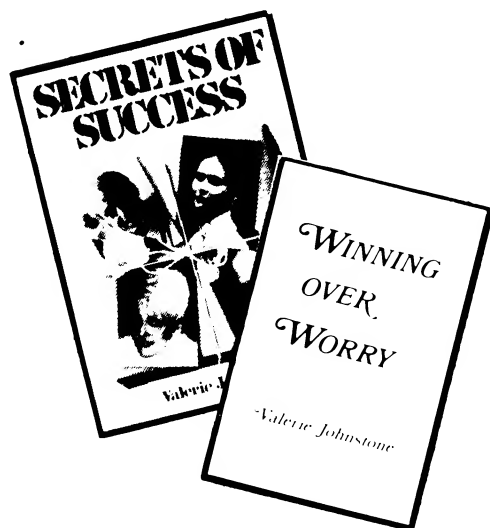


Australian Goat Husbandry

Pat Coleby

128pp \$8.50 post paid

This is still the most popular Australian goat book available. It emphasises improved management and the prevention and handling of health problems.



Secrets of Success

Val Johnstone

136 pp \$15.50 post paid

A collection of thoughts on success from some of Australia's most wellknown people. It provides us with a rare insight into the lives of people we often see and hear about. Personalities include Jeanne Little, Bart Cummings, John Laws and Jon English.

Winning Over Worry

Val Johnstone

144pp \$9.50 post paid

The author shows how to use your mental resources to build a happy, loving, rewarding life. An easy-to-read book with plenty of understanding and advice.

NIGHT OWL PUBLISHERS

PO Box 764 Shepparton 3630

